Université de Montréal

Étude et traitement des changements et désordres de la personnalité faisant suite à un traumatisme cranio-cérébral

Par Jean Gagnon

Département de psychologie
Faculté des Arts et des Sciences

Thèse présentée à la Faculté des Études Supérieures
en vue de l'obtention du grade de
Philosophiae Doctor (Ph.D.) en psychologie
option recherche/intervention en psychologie clinique dynamique

août 2004

Université de Montréal
Faculté des études supérieures

Cette thèse intitulée :

Étude et traitement des changements et désordres de la personnalité faisant suite à un traumatisme cranio-cérébral

présentée par :

Jean Gagnon

a été évaluée par un jury composé des personnes suivantes :

.....
président-rapporteur

.....
directeur de recherche

.....
co-directeur de recherche

.....
membre du jury

.....
examinateur externe

.....
représentant (e) du doyen

Sommaire

Cette thèse s'intéresse à l'étude et au traitement des changements et désordres de la personnalité faisant suite à un traumatisme cranio-cérébral (TCC) à travers la mise en commun des courants conceptuels issus de la psychiatrie, de la psychanalyse et de la neuropsychologie.

La première démarche établit les distinctions phénoménologiques fondamentales entre le désordre organique de la personnalité et le trouble de la personnalité limite (TPL) dans le but de faciliter leur diagnostic différentiel. À partir de deux vignettes cliniques, il est démontré que l'usage complémentaire de ces deux diagnostics peut s'avérer utile pour la clinique et la recherche.

Suite à cette réflexion, une démarche empirique est menée dans le but de décrire la nature et la sévérité des symptômes et traits du TPL faisant suite à un TCC et d'identifier les facteurs qui leur sont associés. Les résultats indiquent que les symptômes et traits du TPL des sujets TCC sont plus nombreux que ceux de sujets contrôles mais que ceux-ci demeurent, somme toute, peu fréquents et différents des phénomènes connus dans la pathologie dite limite (« borderline »). Le TCC semble contribuer de manière plus particulière à la présentation des symptômes affectifs dysphoriques bien connus dans la description des réactions psychologiques face aux pertes importantes et inévitables occasionnées par le TCC. Le rôle joué par la personnalité prémorbide et la qualité affective des relations d'objet dans la

présentation et la sévérité des symptômes et traits du TPL serait plus important que celui joué par les capacités d'inhibition d'une réponse motrice. Les résultats remettent en question l'hypothèse voulant que le TCC représente un facteur de risque dans le développement d'un TPL. Les résultats invitent aussi à mieux distinguer entre l'impulsivité de type limite et celle de type organique et suggèrent, à l'instar de la littérature psychanalytique, que le concept des relations d'objet apparaît pertinent pour comprendre la phénoménologie limite retrouvée suite à un TCC.

La présentation d'un cas clinique, constituant la dernière démarche, souligne la contribution de la personnalité prémorbide et l'importance de la dimension subjective de la personne dans la compréhension de l'impact psychologique du TCC. L'étude de cas permet aussi de démontrer comment il est possible de mettre en commun une approche clinique d'inspiration psychanalytique avec une approche neuropsychologique plus standard pour venir en aide aux personnes présentant des changements et désordres de la personnalité et manifestant des réactions psychologiques complexes pouvant interférer avec leur processus de réadaptation.

Résumé

Article 1

Diagnostic différentiel entre le trouble de la personnalité limite et le désordre organique de la personnalité

Le désordre organique de la personnalité (DOP) est la catégorie diagnostique traditionnelle utilisée pour rendre compte des désordres de la personnalité faisant suite à un traumatisme cranio-cérébral (TCC). L'usage récent de l'axe II du DSM-IV des troubles de la personnalité et notamment du trouble de la personnalité limite (TPL) est apparu dans la littérature consacrée au TCC comme une alternative offrant une meilleure description et une meilleure compréhension des multiples manifestations cliniques des changements et désordres de la personnalité. Cet article propose une conception où il est possible et utile de concevoir les *deux* diagnostics de façon complémentaire. Un diagnostic différentiel basé sur la reconnaissance précise de la phénoménologie respective du TPL et du DOP est essentiel à l'usage correct des deux diagnostics chez les sujets avec TCC. Les phénoménologies respectives des deux diagnostics sont comparées en référence avec les critères du DSM-IV, tandis que deux vignettes cliniques viennent illustrer le propos.

Mots clés : diagnostic différentiel, trouble de la personnalité limite, désordre organique de la personnalité, traumatisme cranio-cérébral

Article 2

Inhibition et relations d'objet dans les traits de la personnalité limite suite à un traumatisme cranio-cérébral

Un traumatisme cranio-cérébral (TCC) est conçu comme un facteur important dans le développement d'un trouble de la personnalité limite (TPL) acquise. Cette étude vise à décrire et à évaluer la sévérité des traits dits limites (« borderline ») après un TCC et explorer leur relation avec un déficit d'inhibition neuropsychologique et une mesure de la qualité des relations d'objet, un élément clé de la structure de la personnalité. Trente (30) sujets ayant subi un TCC modéré ou sévère sont comparés à 30 sujets contrôles sur l'Entretien structuré pour la personnalité limite - version révisée (« Revised Diagnostic Interview for Borderlines : DIB-R »), sur la tâche d'inhibition « Go-no go », sur les échelles « Complexité des représentation des gens » et « Tonalité affective des paradigmes interpersonnels » de l'Échelle des cognitions sociales et des relations d'objet (« Social Cognitions and Object Relations Scale : SCORS »), sur l'Échelle de la dépression de Beck (« Beck Depression Inventory : BDI ») ainsi que sur deux mesures neuropsychologiques, l'Épreuve de fluence verbale (FV) et de Similitudes du WAIS-III. La sévérité des traits limites prémorbides est aussi estimée à partir du DIB-R. Les résultats indiquent que les sujets avec TCC présentent plus de symptômes et de traits limites que les contrôles mais que la sévérité de la symptomatologie demeure faible pour la majorité d'entre eux. Seulement 2 (6%) sujets rencontrent les critères diagnostics du TPL. De plus, la

présence des affects dysphoriques semblent refléter les réactions psychologiques attendues face au défi de leur condition post-TCC. Les deux groupes présentent des profils similaires au SCORS mesurant les relations d'objet. Tel qu'attendu, le groupe TCC démontre une performance inférieure à celle des contrôles sur la tâche d'inhibition « Go-no go » et sur l'épreuve de FV. Enfin, le DIB-R n'est pas corrélé avec la tâche du « Go-no go » mais avec l'échelle « Tonalité affective des paradigmes interpersonnels » du SCORS, le BDI et l'estimation de la sévérité de la pathologie limite de la personnalité prémorbide. Les résultats suggèrent que les traits limites post-TCC, bien que plutôt rares, sont davantage rattachés à la qualité des relations d'objet ainsi qu'à la personnalité prémorbide plutôt qu'à un déficit d'inhibition motrice.

Mots clés : traumatisme cranio-cérébral, trouble de la personnalité limite, inhibition, relations d'objet

Article 3

La psychothérapie psychanalytique suite à un traumatisme cranio-cérébral: présentation d'un cas clinique

Le but de cet article est de montrer, à partir d'un cas clinique, que la psychothérapie psychanalytique peut occuper une place importante en réadaptation auprès des personnes ayant subi un traumatisme cranio-cérébral (TCC) et qu'elle peut apporter une compréhension et une intervention complémentaire à l'approche neuropsychologique, particulièrement pour les personnes qui présentent des réactions psychologiques complexes pouvant interférer avec le processus de réadaptation.

Mots clés : traumatisme cranio-cérébral, psychothérapie psychanalytique

Table des matières

Liste des tableaux

Liste des figures

Liste des abréviations

BDI:	Beck Depression Inventory
BPD:	Borderline Personality Disorder
DIB-R:	Revised Diagnostic Interview for Borderline
DOP:	Désordre Organique de la Personnalité
DSM-IV:	Diagnostic and Statistical Manual of Mental Disorders (4th edition)
OR:	Object relations
OPD:	Organic Personality Disorder
PD:	Personality Disorder
SCID-II:	Structured Clinical Interview for DSM-IV Personality Disorders
SCORS:	Social Cognition and Object Relations Scale
TBI:	Traumatic brain injury
TCC:	Traumatisme cranio-cérébral
TPL:	Trouble de la personnalité limite
VF:	Verbal fluency test
WAIS-III-S:	Similarities test of the Wechsler Adult Intelligence Scale (3rd edition)

Dédicace

À Maria-Raquel, Élizabeth, Maude, Karine, Françoise, Gilles, Yvon, Steve, Marc et Pierre qui m'ont profondément inspiré et motivé tout au long de cette démarche, ainsi qu'à tous ceux et celles qui se battent avec courage tous les jours pour retrouver un sens à leur vie.

Remerciements

À Marc-André Bouchard qui, par son tempérament calme et son attitude rassurante ainsi qu'avec ses mots d'encouragement réguliers, a su veiller à ma motivation durant ce long voyage et m'a permis d'y croire jusqu'à la fin. Merci pour tes commentaires éclairants qui m'ont toujours permis d'avancer et de me dépasser lorsque je pensais avoir déjà tout donné. Ta rapidité à me répondre et ton efficacité à me diriger ont été essentielles à mon « sprint » final.

À Constant Rainville, pour ton ouverture, ton argumentation et ta patience qui ont favorisé l'émergence de mes idées et le départ de cette recherche. Merci aussi pour ta rigueur scientifique qui m'a forcé (avec raison) à retourner souvent à ma méthodologie afin de la parfaire et pour ton support technique indispensable à la réalisation de ce projet.

À Julie St-Amand, pour m'avoir sans relâche appuyé dans mon apprentissage des instruments de mesure et de la clientèle. J'ai apprécié pouvoir rire tout en travaillant. Merci aussi d'avoir suivi ma démarche avec intérêt. À Serge Lecours pour ses conseils scientifiques toujours très pertinents.

À tous et toutes mes collègues de l'équipe TCC et du service de psychologie de l'Institut de réadaptation de Montréal pour leurs encouragements amicaux et avec qui j'adore travailler. Merci à Régis Pearson et à Marie Vanier pour leur support exceptionnel. Un gros merci chaleureux à Liette et Annie pour leur grande amitié et pour leur gentillesse d'avoir passé à travers leur petit bottin pour me trouver des volontaires.

À Francine Giroux pour les nombreuses analyses statistiques et son amitié. À Marc Filaretos pour son support informatique. À Ourida, Lori-Lynn et Suzanne pour leur aide dans la transcription des verbatims. À tous les participants de la recherche,

pour avoir donné généreusement de leur temps et avoir accepté de répondre à des questions souvent peu faciles.

À ma famille et ma belle-famille, Renée, Chryse et Costa, pour leur disponibilité immédiate, leur générosité incroyable et leur volonté sans limite à m'aider afin que je puisse réussir cette entreprise.

Et enfin et surtout à Agneta, Andreas et Mikhaïl, pour leur amour, leur compréhension et leur patience à bien vouloir m'attendre durant toutes ces années. Merci Agneta pour les multiples attentions que tu m'as démontré afin de me donner du courage et de la joie à travers toutes ces heures de travail et pour tes mots d'encouragement qui m'ont permis de me rendre jusqu'au bout. Merci aussi d'avoir partagé mon intérêt et pour ton immense dévouement à m'aider à tout moment. Merci Andreas et Mikhaïl, mes deux adorables garçons, pour vos batailles toujours bienvenues, remplies de rires et de « becs » qui m'ont permis de garder le moral et de tenir la forme jusqu'à la fin.

Introduction

La majorité des personnes ayant subi un traumatisme cranio-cérébral (TCC) modéré ou sévère connaissent des changements et des désordres marqués de leur personnalité. Ces changements et ces désordres sont manifestes dans leurs comportements problématiques et représentent une des causes les plus importantes de leurs difficultés d'intégration sociale, occupationnelle et professionnelle. En parallèle, on retrouve également une souffrance et des bouleversements émotionnels dans leur expérience subjective. Tous ces phénomènes sont le fruit de nombreux facteurs qui interagissent de façon complexe. Parmi ces facteurs, on note la présence des déficits neuropsychologiques tels que l'impulsivité ou la labilité émotionnelle, les réactions psychologiques d'impuissance, d'inutilité, d'irritabilité ou de méfiance face aux pertes multiples consécutives au TCC, et l'apport particulier de la personnalité prémorbide dans la signification vécue de tous ces changements et bouleversements. Les chances de réadaptation de la personne ayant subi un TCC augmenteront dans la mesure où une attention sera accordée à chacune de ces dimensions dans les interventions psychologiques et neuropsychologiques. Cependant, nous manquons de modèles permettant de comprendre de quelle façon tous ces facteurs interagissent. Il en va de même pour la façon dont on peut intégrer différentes approches cliniques.

Traditionnellement en neuropsychologie, les systèmes de catégorisation des changements et désordres de la personnalité étaient conçus à partir des connaissances provenant des effets de dommages cérébraux sur le comportement humain. Par exemple, les études portant sur les effets lésionnels du lobe frontal et sur leurs déficits neuropsychologiques associés ont permis d'expliquer, entre autres, les désordres

particuliers de la motivation et de la régulation du comportement et des émotions. Cependant, ces catégorisations se voient limitées pour rendre compte des réactions psychologiques normales (ex. : deuil) ou pathologiques (ex. : dépression, anxiété) consécutives au TCC, ainsi que des différences individuelles dans la symptomatologie et les capacités d'adaptation psychologiques faisant suite aux pertes de fonctions, de rôles et d'identité. De façon plus spécifique, les désordres de la personnalité et les troubles d'adaptation observés suite à un TCC peuvent être variés et ne peuvent être expliqués à partir simplement des différents sous-types (e.g. apathique, désinhibé, agressif, etc.) du Désordre Organique de la Personnalité (DOP) proposé dans la quatrième édition du Manuel Diagnostic et Statistiques des désordres mentaux (« Diagnostic and Statistical Manual of Mental Disorders » : DSM-IV-TR; American Psychiatric Association, 2000).

Afin de pallier à la lacune du DOP, l'usage du système de classification des troubles de la personnalité selon l'axe II du DSM est apparu récemment dans la littérature scientifique consacrée au TCC. L'usage d'un tel système a révélé que la majorité des personnes avec TCC présentaient un trouble de la personnalité et que le Trouble de la Personnalité Limite (TPL) était le plus fréquent (Hibbard, Bogdany, Uysal, Kepler, Silver, Gordon & Haddad, 2000 ; van Reekum, Bolago, Finlayson, Garner & Links, 1996a). Bien que très stimulant, cet usage pose des défis intéressants en matière de diagnostic, tant au niveau de sa conception que de son application auprès d'une clientèle neurologique. En effet, le diagnostic de trouble de la personnalité est généralement réservé aux troubles qui sont apparus au cours du développement de la

personne et non de manière subite suite à une atteinte cérébrale. De plus, plusieurs symptômes post-TCC peuvent mimer un ou plusieurs traits pathologiques de la personnalité et entraîner des erreurs diagnostiques. Ces observations soulèvent donc plusieurs questions. Est-il possible que les changements et désordres de la personnalité faisant suite à un TCC partagent des similitudes de surface avec le TPL qui masquent leurs différences plus fondamentales? Quels sont les traits et symptômes spécifiques du TPL faisant suite à un TCC? Sont-ils les mêmes que ceux que l'on retrouve habituellement chez les « vrais » sujets TPL sans TCC? Quels sont les mécanismes psychologiques et neuropsychologiques associés à ces traits et symptômes et en quoi la personnalité prémorbide contribue t-elle à ceux-ci? Enfin, de quelle façon peut-on venir en aide à cette clientèle présentant un désordre de la personnalité faisant suite à un TCC dont sont issues des réactions psychologiques complexes interférant bien souvent avec le processus de réadaptation. Cette thèse a pour but d'explorer diverses réponses à ces questions.

Un premier article discute de la co-morbidité et du diagnostic différentiel entre le DOP faisant suite à un TCC et le TPL. Il s'agit d'un effort de synthèse dans la compréhension des concepts cliniques sous-jacents à ces deux diagnostiques dans le but de bien distinguer leur phénoménologie respective. Ultimement, une meilleure reconnaissance de cette phénoménologie permettra de faciliter et d'encourager un usage adéquat de l'axe II du DSM-IV pour rendre compte des troubles de la personnalité qui préexistaient au TCC et sur lesquels peuvent s'ajouter un DOP. Cet article sera soumis au périodique « Journal of Head Trauma Rehabilitation ».

Le deuxième article qui compose la thèse présente une étude empirique et compare des sujets ayant subi un TCC modéré ou sévère à des sujets contrôles sur une échelle mesurant la fréquence et la sévérité des traits et symptômes limites (« borderline ») afin de mieux les décrire et d'en estimer leur importance. Il s'agit de l'Entretien structuré pour la personnalité limite – version révisée (« Revised Diagnostic Interview for Borderlines: DIB-R; Zanarini, Gunderson, Frankenburg & Chauncey, 1989). Les deux groupes de sujets sont aussi comparés, entre autres, sur une mesure neuropsychologique évaluant les capacités d'inhibition motrice (e.g. tâche du « Go-no go »; Nigg, 2000) et sur une autre d'inspiration psychanalytique évaluant la qualité des relations d'objet (e.g. l'Échelle des cognitions sociales et des relations d'object ; « Social Cognition and Object Relations Scale » : SCORS; Westen, 1991). Ces variables sont issues de deux courants de recherche distincts. L'immaturité des relations d'objet a été longuement étudiée et démontrée chez les « vrais » sujets TPL mais jamais auparavant chez des sujets avec TCC. Quant à la désinhibition motrice (i.e. déficit d'inhibition motrice), il a été postulé qu'elle jouait un rôle central dans l'apparition du TPL suite à un TCC mais cela n'a jamais été démontré (Hibbard et al., 2000). Cette hypothèse s'inscrit dans un nouveau courant de recherche étudiant le rôle de la désinhibition dans l'impulsivité des sujets TPL et postulant l'existence d'un facteur étiologique de nature cérébrale (ex.: dysfonctions frontales) dans la survenu de ce trouble (Dougherty, Bjork, Huckabee, Moeller & Swann, 1999 ; Hochhausen, Lorenz & Newman, 2002 ; van Reekum, Links & Fedorov, 1994 ; van Reekum, Links, Finlayson, Boyle, Bolago, Ostrander, & Moustacalis, 1996b). Une mesure est

incluse pour évaluer la sévérité de la symptomatologie limite prémorbide (DIB-R), ainsi que des mesures neuropsychologiques comme le Test de la fluence verbale et l'épreuve des Similitudes du WAIS-III. Des analyses sont menées afin de connaître la contribution de chacun de ces facteurs à la phénoménologie limite post-TCC et de mieux comprendre comment ces facteurs interagissent ensemble. Cet article sera soumis au périodique « Brain Injury ».

Un troisième article, d'intérêt clinique, illustre, à partir d'une histoire de cas, comment il est possible de comprendre et de venir en aide aux personnes présentant des changements et désordres de la personnalité faisant suite à un TCC en combinant une approche d'inspiration psychanalytique avec la neuropsychologie. L'accent est mis sur l'importance de comprendre l'expérience subjective et de tenir compte de la personnalité prémorbide de la personne. Cet article a été soumis récemment aux « Publications du Centre de Recherche Interdisciplinaire en Réadaptation » dont le thème est le TCC.

Article 1

Differential Diagnosis Between Borderline Personality Disorder and Organic Personality Disorder Following Traumatic Brain Injury

Differential Diagnosis Between Borderline Personality Disorder and Organic Personality Disorder Following Traumatic Brain Injury[1]

Jean R. Gagnon

Université de Montréal et Institut de réadaptation de Montréal

Marc-André Bouchard

Université de Montréal

Constant Rainville

Institut Universitaire de Gériatrie de Montréal

[1] Correspondence should be addressed to Jean Gagnon, Institut de réadaptation de Montréal, 6300 ave Darlington, Montréal (Québec), H3S 2J4.

Differential Diagnosis Between Borderline Personality Disorder and Organic Personality Disorder Following Traumatic Brain Injury

Abstract

Organic Personality Disorder (OPD) is the traditional diagnostic category used to account for personality disturbances after traumatic brain injury (TBI). The recent use of Axis-II Personality Disorders notably Borderline Personality Disorder (BPD) has appeared in the TBI literature as an alternative to OPD. This would presumably offer a better description and understanding of the multiple clinical manifestations of these personality changes and disorders. This paper offers a view that it is possible and fruitful to use both diagnoses in a complementary manner. An accurate recognition of the respective phenomenologies of both BPD and OPD is a key factor in achieving a differential diagnosis, including if required a dual diagnosis. The phenomenology of both conditions in reference with DSM-IV criteria is compared and illustrated through two clinical vignettes.

Key words: differential diagnosis, borderline personality disorder, organic personality disorder, traumatic brain injury

Differential Diagnosis Between Borderline Personality Disorder and Organic Personality Disorder Following Traumatic Brain Injury

Introduction

An Organic Personality Disorder (OPD) following a traumatic brain injury (TBI) is associated with the emergence of sudden changes related to a medical condition. As such, OPD differs from the construct of a personality disorder (PD) as established by the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-Text Revision: American Psychiatric Association, 2000). In essence, OPD concerns changes from the premorbid personality, which may belong to the following subtypes: labile, disinhibited, aggressive, apathetic, paranoid, other, combined or unspecified. Faced with a situation where those changes occurred without a pre-existing PD, the contrast between the premorbid and post-TBI traits is often so obvious that a diagnosis of OPD seems straightforward and unproblematic. But when the changes occur in a person whose *pre-existing* PD and pathological traits are similar to those usually produced by brain damage, it often becomes quite confusing and difficult to establish a differential diagnosis. This is particularly true of patients functioning at a borderline level prior to their TBI, the main reason being that Borderline Personality Disorder (BPD) shares several behavioral and emotional traits with OPD. Additionally, the diagnosis of BPD might be overlooked in cases where the maladaptive pre-existing traits are clinically at a sub threshold level only to become fully evident when they interact with the new neurological condition and with

the consequent psychosocial factors following TBI. Moreover, both the premorbid BPD traits and the neuropsychologically based personality traits may co-exist, influencing each other and creating a situation of comorbidity. Attributing the etiology of all behavioral disturbances to OPD in such cases often leads to serious clinical management problems. The sources of diagnostic confusion are numerous however: BPD is a heterogeneous condition; no single feature is invariably present; and a diagnosis may result from several possible combinations of the available criteria (Hyman, 2002). Thus, it may become difficult for the clinician to determine which traits belong to the character of the person and which traits are the consequences of the cerebral damage. In any case, the planning of a more complete and integrative rehabilitation program is often dependant on the possibility of calling upon an Axis II PD in order to complete the initial OPD diagnosis with several patients whose maladaptive responses to the challenging new reality of TBI cannot be accounted for otherwise.

This paper systematically reviews and compares the phenomenology of both BPD and OPD in order to explore various differential diagnostic issues raised by showing areas of potential overlap as well as zones of clear difference between both syndromes. This would represent a rare opportunity and effort in this growing literature in the hope of facilitating diagnostic practices.

Use of BPD diagnosis with TBI patients

Personality traits are defined in DSM-IV as "enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal context" (American Psychiatric Association, 2000, p. 686). A PD is diagnosed when there is a deviated, inflexible and pervasive pattern of inner experience and behavior manifested in at least two areas like cognition, affectivity, interpersonal functioning and impulse control, and when the pattern leads to distress or impairment. Of relevance here is the "F" criterion which specifies that the observed pattern must not result from a personality change due to a general medical condition, such as TBI. PD should rather be the product of a long-term developmental process. When personality disturbances are the result of a personality change after TBI for example, a diagnosis of "Personality change due to a general medical condition" (p. 187) is indicated, the so-called OPD.

Three tendencies seem to exist in the use of an Axis-II PD after TBI. The traditional view is to consider OPD as the primary diagnosis of personality disturbances/changes, and to conceive that some post-TBI symptoms could mimic pathological personality traits. Judging by the inexistence of any mention of PD in the reviews of psychiatric disorders following TBI (Bond, 1984; Grant & Alves, 1987; Lishman, 1973, 1978; Prigatano, 1987a; Slagle, 1990), this view seems to have prevailed over the past two decades following the establishment of the Axis II of PD diagnoses. From a clinical point of view, the multifactorial (neurocognitive, psychological, premorbid, psychosocial) and complex etiological possibilities of PD associated with TBI seem

to have been constrained to a single diagnostic and pathological framework, with consequently impoverished treatment options, resulting in a potential systematic neglect of patient's needs.

A second tendency "ignores" the "F" criterion specified in the DSM-IV diagnostic rules and preferentially elects an Axis-II diagnosis over any Axis-I considerations including the very real possibility of a true OPD. This approach may have a descriptive if not etiologic value, as it may indeed account for some of the maladaptive psychosocial responses to the TBI situation. Two recent studies have called for a consideration of an Axis-II PD diagnosis to enrich the description of post-TBI clinical phenomenologies (Hibbard, Bogdany, Uysal, Kepler, Silver, Gordon & Haddad, 2000; van Reekum, Bolago, Finlayson, Garner & Links, 1996). In support of their view, they found a high prevalence of so-called *acquired* PD after TBI, ranging from 39 to 66%, much higher than the 10% typically reported in psychiatric outpatients in clinical settings (see Skodol, Gunderson, Pfohl, Widiger, Livesley & Siever, 2002). The most common PD was BPD, ranging between 22 and 34%. When the group of subjects was divided according to presence or absence of a pre-TBI PD, the prevalence of BPD in individuals without a premorbid PD was still the highest with 28% (Hibbard et al., 2000). Particularly intriguing is the finding by Hibbard et al. (2000) that 11 of the 12 subjects with a premorbid PD who presented a BPD post-TBI had a concurrent Axis-II disorder before the brain injury. In this situation it appears almost as if a PD of one kind would be transformed into another kind through the influence of the cerebral damage and with the psychological reactions to the

deficits (considering only the more restricted BPD DSM-IV definition). The authors suggested that the frontal disinhibition and ongoing adjustment challenges to the "new damaged observed self" (after the loss of the former intact self) could account for the high prevalence of BPD traits. This view may be circular, a consequence of ignoring the OPD diagnosis and considering only the option of a PD diagnosis, illustrating the possible confusion resulting from a failure to distinguish between the two clinical identities. The circularity is to account for the disinhibition partly by referring to PD mediated dysregulation, and by explaining the PD by the presence of a frontal disinhibition.

The third more recent approach is to consider a possible comorbidity between PD (particularly of the BPD type) and OPD. On this view, a person with BPD (diagnosed or not) having also suffered from TBI may still present a borderline phenomenology after the brain damage but this time, interactively combined with a possible OPD. Koponen, Taiminen, Portin, Himanen, Isoniemi, Heinonen, Hinkka & Tenovuo (2002), by calling explicitly upon both diagnoses, found only 3% of subjects who presented exclusively with BPD and 15% of subjects who presented with OPD. Meanwhile, half of the OPD subjects presented also PD, an indication of the relevance and usefulness of using both diagnoses. According to Koponen et al. (2002), variations in the rate of BPD and OPD diagnoses across studies might indicate missed diagnoses when only one diagnosis is considered. The advantage of a systematic consideration of both PD and OPD is obvious, its limitation being the

possible confounding task of establishing a clear differentiation between what may appear as similar phenomenological traits.

Phenomenology of BPD and OPD after TBI

The DSM-IV categorical approach to Axis II-PD has been challenged (e.g. Millon & Davis, 1995; Paris, 1998). Further, borderline pathology in general and BPD in particular, are often viewed as a heterogeneous population, notably including an organic subgroup (Andrulonis, Glueck, Stroebel, Vogel, Shapiro & Aldrigde, 1980). Nevertheless, we have chosen the standard DSM-IV criteria of BPD as a starting point to organize the comparison. DSM-IV criteria have received empirical support (Gunderson, 2001). Its descriptive nature is helpful when comparing the phenomenologies of both disorders. We have drawn our descriptions of BPD from several authoritative authors: Gunderson (1984, 2001; Gunderson & Kolb, 1978; Gunderson, Kolb & Austin, 1981), Kernberg (1967, 1975, 1984) and Masterson (1976, 1985). Gunderson's conceptualization is intermediary in scope between the more restricted DSM-IV definition and the borderline personality organization concept proposed by Kernberg and Masterson, which includes patients with severe personality disorders of many different varieties (Segal, 1990; Westen & Cohen, 1993).

According to the strict OPD definition, only behavioral and emotional changes which are the primary consequences of TBI should be discussed here. However, given that the frontier between organic and psychosocial factors is often difficult to draw and

given also the absence of a single etiological classification (Gainotti, 1993; Judd & Fordyce, 1996; Lipowski, 1975; Prigatano, 1986), we have chosen to include in our discussion the commonly accepted and general disturbances/changes that are typically seen after TBI without further consideration of etiological issues. Our purpose is to provide a general phenomenological picture of what is typically encountered in a TBI (vs. BPD) patient. But the reader should be reminded that an OPD diagnosis is more appropriate for primary organic changes (e.g. labile, disinhibited, apathetic, aggressive or paranoid types) whereas other diagnoses (ex.: Adjustment Disorders; DSM-IV, 2000, p. 679) may be suitable for persistent and maladaptive changes secondary to the stress or disabilities associated with TBI. Secondary changes are numerous and can mimic borderline traits as much as the primary ones. For the present purposes, OPD descriptions were limited to the specific post-TBI context, based on clinical experience and drawn from the relevant literature.

The pattern of BPD is characterized by instability in interpersonal relationships, self-image, and affects, and a marked impulsivity (DSM-IV, American Psychiatric Association, 2000, p.706). Typical descriptions of behavioral and emotional consequences of TBI share many surface characteristics with BPD: quick-tempered, changeable, poor emotional control, irritable, impatient, angry, violent, paranoid, impulsive, disinhibited, childish, immature, insensitive to the needs of others, egocentric, experiencing interpersonal conflicts and the like (Brooks & McKinlay, 1983; Brooks, Campie, Symington, Beattie & McKinlay, 1986; Ford, 1976; Lezak, 1978, 1987; Oddy, Coughlan, Tyerman & Jenkins, 1985; Tate, Lulham, Broe,

Strettles & Pfaff, 1989; Thomsen, 1984; Weddell, Oddy & Jenkins, 1980). Each criterion will be discussed in turn in an attempt to underscore the specific distinctive quality of each manifestation in both BDP and OPD, while pointing to their apparent overlap or equivalence (see Table 1).

Please insert Table 1 here

The first DSM-IV criterion for BPD is *fear of abandonment*. Both groups present with such fears but their nature is different. In BPD, this dreadful anticipation is generally experienced as dependent on the behavior of the other, which is perceived as threatening, mad or persecutory, insensitive and wanting to get rid of them, etc. Borderlines tend to activate massive protective (defensive) reactions against this possibility: they may panic, cling, act-out a suicidal gesture, self-mutilate or become erratic. A sense of void and emptiness, comparable to a psychic death is apparent (lack of object constancy; Mahler, 1968); rage, depressive states and the like appear. By contrast, a TBI person experiencing a fear of abandonment will attribute it directly to the loss of their competency or self-esteem, a concrete consequence of their TBI (Kravetz, Gross, Weiler, Ben-Yakar, Tadir & Stern, 1995; O'Shanick & O'Shanick, 1994; Strain & Grossman, 1975). They do not typically see it as a response to a relational attitude of a significant other. Loss of functions and roles induces feelings of worthlessness which in their mind is the reason why the other would leave them. This dilemma often gets resolved once the person makes some progress towards real

acceptance of his/her new situation, while a BPD individual would tend to maintain the fear, activated in both intimate and therapeutic relationships (transference). Fear of abandonment is a symptom in TBI but a trait in BPD.

The second criterion concerns *intense and unstable relationships*. It is well-known that both clinical groups experience interpersonal conflicts. The borderline's interpersonal conflicts are the reflection of the chaotic, extreme and contradictory representations they entertain of themselves and of others. Their expectations are unrealistic and their perceptions are changeable, shifting from one position (e.g. ideal) to the opposite (e.g. complete devaluation and persecution). The main organizing mechanism presumed to underlie this feature is splitting, a capacity to entertain mutually contradictory representations of self and other in close succession, both acknowledged and denied. As a result, BPDs might feel that they are with an ideal partner and everything seems "perfect". But shortly thereafter, they might feel as if the other has changed completely and has no value any more, or worse that he/she is now "bad", rejecting and cruel. The borderline person may feel hopelessly angry, bad, ugly and also dependent on the other. The various acting outs may be the only way that they can think of to get their partner to respond. Such gestures are meant more as a manipulation and attempted control than as a communicative message. The aim is often to get the other to make them feel good again, alive and lovable.

By contrast, TBI patients do not experience interpersonal problems that are related to their expectations or their changing views of the other. Their relationships tend to

stabilize, as is particularly the case between parents and their TBI grown-up child (Kreutzer, Marwitz & Kepler, 1992; Slagle, 1990). Whenever the pre-TBI relationships are not solidly established, they tend to be disrupted, leaving the person more and more isolated with a devoted caregiver (Florian, Katz & Lahav, 1989; Lezak, 1978, 1988). This is one main reason why caregivers experience such a burden. The impact of TBI associated behavior problems is well documented, and it is often the case that family and close relatives do not know how to deal with them (Brooks, 1984; Brooks et al., 1986; Spatt, Zebenholzer & Oder, 1997). Parents tend to use denial while spouses feel trapped by the situation, all caught-up and embroiled between anger, frustration, guilt and despair, between their handicapped spouse and children, etc (Florian, Katz & Lahav, 1989; Lezak, 1978, 1988). Depression among family members is often seen and it is a challenge for everyone (Kreutzer, Gervasio & Camplair, 1994a, 1994b). Compounding the difficulty, the patient lacks some of his/her previous resourcefulness and family members in many ways "do not recognize" the patient as the same person they knew. But in all cases, a key difference between diagnoses is that once the TBI related changes and/or distortions are established, the view each has of the other remains stable, in contrast to the "rapid" oscillations between contradictory images typical of BPD subjects. Moreover, TBI patients entertain stronger and more profound links with their intimates, whom they can appreciate as having a separate, valued identity. In the TBI dyad, each person acknowledges the identity of the other. In the BPD dyad, each person experiences confusion as he/she doesn't know who he/she is for the other, a very difficult situation to handle given the pressure on the internal sense of reality.

Moreover, the BPD patient's social life, even when chaotic, often remains very active, while the TBI patient's social life is narrowed down and restricted, leaving the person increasingly socially isolated. Finally, both BPD and TBI patients may induce strong countertransference reactions (despair, rejection, and impatience) but the affective scope of those reactions is narrower with TBI patients. Given his/her behavioral problems, the TBI patient will stimulate frustration, anger or fear in the clinician, forming a rigid and predictable pattern. The BPD patient will induce in the clinician emotional reactions that correspond to the variously projected, externalized and enacted roles required by the nature of their internal scenarios: despaired and abandoned child-overprotective parent/clinician; voracious and mistrustful rebellious child-withdrawn and guarded parent; sexually enticing and controlling powerful mate-seduced, abusive but guilty and inhibited lover; etc. These transference-countertranference cycles are exceptional in TBI patients, as we can see with the social isolation of which they are victim.

Identity disturbance is a key defining characteristic of BPD. As a result of identity diffusion, BPD individuals entertain a painful confusion as they do not know if they are strong or weak, female or male, sane or insane, etc. as a consequence of their split self (and object) inner representations. Their sense of self will vary depending on the person who they are presently with, creating much anxiety. Further, the various contradictory experiences of self are not linked to one another; there is little integration between them and much dissociation. By contrast, TBI patients

demonstrate a sense of having lost their identity (Bond, 1984; Parker, 1996; Stratton & Gregory, 1995; Tyerman, 1984; Tyerman & Humphrey, 1984). They know who they were before the injury and they know (or learn gradually) who they have become after the brain damage. This is the case for patients who do not present an anosognosia because when this condition is present, patients do not recognize their deficits (or the new reality about themselves) and consequently do not suffer from an "identity disturbance". But persons who are conscious of the important changes they have undergone, feel robbed unfairly of their roles and previous competencies. They inevitably go through a process similar to mourning: denial, anger, depression, ultimately some degree of acceptance and resilience (Kerr, 1977). Furthermore, they are aware of a sense of not finding their old self again, because they have simultaneous access to both images, their previous premorbid self and their present post-TBI self. The situation is quite different with borderline subjects who maintain split, contradictory images of themselves, while failing to see the contradictions, or actively emotionally denying its relevance. For TBI patients, mourning is the process of integration when both images come together (Groswasser & Stern, 1998; Lewis & Rosenberg, 1990; Stern, 1985). Even if their images are ambivalent, distorted or lost, these representations will eventually evolve and become integrated with time and experience. The challenge for them is to learn more about and accept who they have become and integrate this new self with what they already knew about themselves (pre-injury self). Unless systematic attention is given to splitting and other defensive operations, BPD patients will maintain a confused feeling that they do not know who they are.

Impulsivity, our next criterion, is characteristic of both diagnoses but should have a more restricted, narrow meaning with BPD. Borderlines are impulsive in a self-damaging way and in the context of strong and painful feelings associated with personal intimate relationships. While experiencing the feeling of unbearable pain or need, they will attempt to discard it by turning to impulsive, typically self-damaging acting out. Such externalization often has a concrete and functional quality: controlling the pain, punishing the self for being bad, exerting control over the other, facing the shame by turning to rage, etc. But the BPD patient is often not thinking of his/her psychic reality in terms that would associate meaning and symbolic value to their impulsive actions. It is the goal of therapy to help him/her transform these modes of thinking into more mindful and symbolic form, to tolerate the intense painful affects and to learn to express them through verbal modes (Bateman & Fonagy, 2004; Lecours & Bouchard, 1997).

TBI patients are also impulsive but their impulsive actions are rarely colored by a relational context. First, in the acute stage for example, they present a motor agitation and demonstrate purposeless moving (Bond, 1984). Later on, they may exhibit a "concrete attitude" or may be stimulus-bound and respond indiscriminately to surrounding stimuli (Goldstein, 1952; Duffy & Campbell, 2001; Salloway, 1994). Inevitably, their response or its intensity will be inappropriate to the current context (ex.: eating dessert before the meal, eating twice in a row). Their impulsivity is mostly determined by a neurocognitive element. They have difficulty thinking

through a problem before attempting to resolve it (Kraus & Levin, 2001; Luria, 1973; Stuss & Benson, 1986). Their analysis is partial and they often abandon a task or problem before finding and applying the solution. They forget important steps in a multistep task. TBI subjects are also known to be impulsive in their social life, so they will say or do inappropriate things without considering the consequences. They will act socially in a grossly concrete and inappropriate way (Blumer & Benson, 1975; Hart & Jacobs, 1993; Hecaen & Albert, 1975). In essence, their impulsivity which is "devoid of functional or psychological meaning," is attributed to a lack of (frontal) inhibition, a failure to organize and regulate their cognitive executive functions and associated behaviors. This does not imply that in general their behaviors are meaningless and disconnected from the rest of their personality, although they are often inappropriate to the context. In fact, because of their disinhibition, several of their previously toned-down, covered and inhibited personality traits, characteristic of their true self, will surface (Jarvie, 1954). They will not be able to stop themselves from saying things or expressing feelings which were previously inhibited or appropriately regulated. For example, a highly moral person entertaining strong opinions against sexual expressions, may, following a frontal lesion, maintain this attitude of disgust and disapproval towards sex, but will now share his/her indignation indiscriminately with anybody, irrespective of context. In this sense, the disinhibition "contributes" nothing to the previous personality (Bond, 1984; Jarvie, 1954); disinhibition does not "create" a new self. It is probably for this reason that self-damaging acts after TBI are rare in cases where this pattern is not found prior to the brain injury. Therefore, the disinhibition mechanism and associated impulsivity seem

to be involuntary and meaningless. In other words, the issue of causal determination (the "why" question) cannot be articulated with the "when" and "where" questions anymore. Stated differently, if a patient uses coarse language, it does not necessarily mean that he/she is impolite or disrespectful; if a patient utters sexual remarks or masturbates in public, it does not necessarily mean that he/she has become an exhibitionist pervert. Neuropsychological models tend to use impulsivity and disinhibition interchangeably, or even prefer using a concept of disinhibition rather than impulsivity to describe these phenomena (Levin, High, Goethe, Sisson, Overall, Rhoades, Eisenberg, Kalisky & Gary, 1987). The borderline's impulsivity is typically an active defensive act that is often associated with a primitive form of thinking, which may be concrete in form, or filled with symbolism, but its purpose is psychologically functional.

Impulsive sexual behavior is common to both groups, but it often takes the form of promiscuous sexual encounters in BPDs and of sexual disinhibition in TBI, often individually based and expressed in a social context: exhibitionism, masturbation in public, sexual contacts without consent, sexual remarks provoking negative feed-back from listeners, etc. Inappropriate touching behavior and exhibitionism are the most common sexual disinhibitions seen after TBI (Simpson, Tate, Ferry, Hodgkinson & Blaszczynski, 2001). Compulsive-impulsive eating in TBI may illustrate disinhibition whereas a BPD patient will binge or purge under the influence of internal scenarios involving a rebellious and/or punishing relationship for example. There are some exceptions to this functional dissociation between both syndromes, such as substance

abuse. In TBI patients, substance abuse is a poor coping mechanism used in facing their losses and social adjustment challenges (Hibbard, Uysal, Kepler, Bogdany & Silver, 1998; Kreutzer, Witol & Marwitz, 1996; Stratton & Gregory, 1995) whereas it is often used by borderlines as a powerful ally in facilitating their various enactments (ex.: masochistic sexual encounters, dissociations towards a defensively idealized romantic affair, etc.). Finally, some TBI patients learn a form of functional (behaviorally reinforced) aggression towards their caregivers and social environment, which should be differentiated from the more impulsive nonfunctional form of aggression discussed above. And one is reminded that BPD aggression is more often turned against the patient himself/herself (suicidal efforts or self-mutilation), to which we will turn when discussing the criteria of anger and of suicidal and self-mutilating behaviors (see below).

Emotional lability is also a key feature in both conditions. BPD patients are rarely stable in mood, rarely happy either. They are plagued by a handful of rapidly shifting, mostly dysphoric moods. They seem to move from one crisis to the next, the result of their intense, often unbearable and concretely felt affects: for example, their sense of shame is directly experienced shame; they rarely are able to consider only shame as an idea. Their self-soothing and self-regulation are deficient, and they are often found in states of distress, very dissatisfied with the way others treat them. TBI patients also have difficulties in controlling their moods (Duffy & Campbell, 2001; Levin & Grossman, 1978; Lipowski, 1975; Prigatano, 1986). They become very excited when overstimulated, and very frustrated when they fail in a task or in obtaining something

they want. Catastrophic reactions manifested in panic-like episodes may occur in response to their incapacity to adapt to the demands of their immediate environment (Goldstein, 1952). The external manifestations of lability are quite similar in both clienteles. However, the TBI patient will tend to experience a wider range of different kinds of emotions compared to the BPD patient. Euphoria (or manic-like quality of the mood) and pathological laughter are among typical TBI patient's manifestations rarely seen in BPD (Blumer & Benson, 1975; Heacan & Albert, 1975; Salloway, 1994; Starkstein & Robinson, 1997; Zeilig, Drubach, Katz-Zeilig & Karatinos, 1996). The TBI patient's affects are described as shallow and as more related to a disorder of inhibition, a concrete attitude, a decrease of activity and a disorder in the expression of affects than to a primary mood disorder or affect dysregulation (Duffy & Campbell, 2001; Goldstein, 1952; Heacan & Albert, 1975; Lipowski, 1975; Salloway, 1994). Differences in the borderline subject's response to help offered from others are noted, given also their difficulty in self-soothing, as they may react positively to a reassuring intervention. A TBI patient in distress will often respond with confusion to verbal intervention, even if reassuring. In such cases, a better strategy would consist of a reduction in stimulation at a concrete level (Howard, 1988; Salloway, 1994).

Suicidal efforts and self-mutilating behaviors are one of the most specific features of BPD. They typically occur in a relational context, which provides a purpose to the acting out which is used to avoid the pain of rejection, to induce a rescuing response as a "proof" that someone wants them to live, etc. In the context of depression, the feelings are anaclitic in nature, meaning that they come with a deep sense of

abandonment which is associated with rage, fear, guilt, helplessness, emptiness, etc. TBI patients may attempt suicide because they want to bring an end to their unhappy life (Bond, 1984; Ford, 1976; Stratton & Gregory, 1995) but not because they see themselves as internally "bad" and want to be punished. Their suicidal gestures are not attempts to induce a rescuing response or some reassurance that they are of importance for others. Their suicidal gestures are motivated by their wish to stop suffering from a life which appears meaningless to them. Manipulative suicide attempts after TBI are less frequent than in BPD and self-mutilation almost inexistent (Gagnon, Bouchard, Rainville, Lecours & St-Amand, 2004).

The next criterion concerns *feelings of emptiness*. Both BPD and TBI patients experience feelings of loneliness and boredom but for different reasons. BPDs feel the need for a comforting presence; somebody is missing, concretely felt as a hole inside of them, usually experienced as an extremely painful kind of psychic deadness. They cannot tolerate being in this state for long, so they call on rage, panic, persecution, and the like to avoid feeling the emptiness. TBI patients experience boredom and loneliness as an actual response to an objective situation: they are objectively more isolated; their deficits leave them without a job or opportunities to show their capacities or to feel competent (Florian et al., 1989; Kreutzer, Devany, Myers & Marwitz, 1991; Lezak, 1987; Oddy et al., 1985; Prigatano, 1986; 1987b; Tate et al., 1989). In addition, their cognitive deficits make it difficult for them to get involved and interested in various activities because the latter have become more difficult to pursue, including activities they found interesting before their brain injury.

Both groups experience *intense anger and difficulty to control it*. BPD patients experience much anger; it is one of their predominant feelings. But this is always accompanied by other dysphoric feelings such as helplessness, hopelessness, terror, etc. More than anger, rage is typical. Rage is a more primitive and regressed affect, a normal response of the newborn to pain and frustration. The adult BPD's rage is accompanied by a sense of being left alone with their difficulties; they feel that they are victims of the cruelty of the world and they feel sorry for themselves. They find themselves wanting to destroy or attack the "bad other" but at the same time they need him/her. These so-called "oral needs" are charged with primitive aggression. They may feel extremely guilty and scared of wanting to take everything from the other, even his/her existence (e.g. "eating the feeding breast"). By contrast, TBI patients are angry but the anger does not have this rageful, "oral" quality. They are angry in response to the concrete losses in their life: loss of function, loss of roles, loss of others, and even loss of hope to recuperate. They are described as irritable because they do not accept the dramatic changes of their lives and their ability to tolerate repeated failures decreases. It is known that their emotional distress, frustration and irritability are frequent and tend to increase in both frequency and intensity with time (Fordyce, Roueche & Prigatano, 1983; Novack, Daniel & Long, 1983; Prigatano, 1986; Thomsen, 1984). One explanation is that their awareness of their deficits increases during the first year post-TBI, as they increasingly appreciate that their new situation is chronic. Other kinds of aggressive reactions are seen with TBI patients. They may become intermittently explosive, often provoked by partial seizures of the

temporal lobe (Lishman, 1978; Prigatano, 1987a; Slagle, 1990; Wood, 1987). This anger comes without warning and has no target. Low tolerance to frustration also plays a key role, as they may become angry with minimal provocation (Bond, 1984; Wood, 1987), but this anger is not specific as it is interchangeable with anxiety, sadness, etc. Anger is simply one possible emotion among many that they find difficult to contain (Lishman, 1978; Prigatano, 1987a).

One last category of aggression often observed in TBI patients is acquired and functionally reinforced mostly during their post-awakening stage (Slagle, 1990; Wood, 1987). Patients might "learn" (by conditioning) that any of a variety of dysfunctional behaviors will result in obtaining what they want or avoiding what they do not want. Difficulties in identifying the source of a problem or in adequately communicating their needs might maintain these behavior problems (Prigatano, 1987a). Because the hospital or family environment is more prompt to respond when the patient is yelling, biting or hitting, these extreme dysfunctional behaviors often get reinforced unwittingly. A functional analysis is necessary at this point in order to reveal what kind of aggressive behaviors are being exhibited. If the aggressive behavior is due to partial convulsion seizures, it would not necessarily appear in relation to a particular antecedent or consequence, thus anti-convulsive medication should help (Slagle, 1990). If it is a low-tolerance-to-frustration problem, it would appear immediately following a specific stimulus; therefore, changes in the environment or the rehabilitation program are necessary to adjust the environmental demands and/or stimulation while respecting the patient's capacities (Griffiths,

Gardner & Nugent, 1998). Finally, if the aggressive behavior is functional, it would increase in relation to a particular consequence; thus, extinction of inappropriate responses and positive reinforcement of toned-down assertive expressions are called for (Eames & Wood, 1985; Manchester, Hodgkinson & Casey, 1997; Teichner, Golden & Giannaris, 1999). In all three cases, the proposed solutions would not be helpful to the BPD patient because his/her anger is in proportion to an internal psychical experience that is both irrational and concretely felt as real, therefore the anger must be attended to as such and will not respond even to the best-intentioned caregiver or family member.

Both groups of patients may become *paranoid.* In TBI cases, transient paranoid states might occur during or soon after the post-traumatic amnesia stage and more permanent psychotic states are occasionally seen with severe TBI (Bond, 1984; Grant & Alves, 1987; Lishman, 1973; Prigatano, 1987a; Slagle, 1990). Those paranoid ideations are caused by disturbed consciousness or defective perceptual and memory functioning and are more often seen when patients are no more in a position to understand their social environment. For example, when they awake, patients may not remember the accident, and they do not have any memory of the events that would help them make the right causal attribution. TBI patients may not understand the intentions or actions of others (Prigatano, 1987a) or they may catch one word in a sentence out of context and elaborate from it suspicious interpretations concerning their social situation (Goldstein, 1952; Hecaen & Albert, 1975). Other kinds of paranoid ideas are of a more reactive nature. Because TBI patients often find it

strenuous to participate in conversations or to attend any social activity, they often develop the feeling of being misunderstood or a fear of being negatively judged by others (Kreutzer et al., 1991; Prigatano, 1986). They then start to mistrust their social environment or become disinterested in it (Kreutzer et al., 1991; Levin & Grossman, 1978). In both cases, the situation evolves on a long-term basis. In BPD patients, paranoid states are brief, mood-related, and happen in the context of an interpersonal immediate crisis; when in an angry state, they attribute it to others and feel threatened as a result. They may also indicate poor stress regulation when facing a crisis. But their perceptual or memory skills are not involved. It is known that BPD patients experience brief, reversible losses in reality testing. But they readjust their perceptions when given feedback as they are able to empathize with the interviewer's perspective on them. This would not be possible for a rigid and cognitively defective TBI patient.

Dissociative reactions related to early psychosocial trauma (e.g. abuse, neglect, etc.) are frequent in BPD but rare in TBI patients. Traumatic reactions in TBI are typically manifested through avoidance rather than by reminiscences, perhaps due to the fact that they do not remember the accident following the retrograde amnesia (Ohry, Rattok & Solomon, 1996). As a consequence, they do not need to protect themselves from the traumatic events (intrusions) and dissociative reactions are not seen. But they do maintain a sense of insecurity with the stimuli (avoidance) which is generally developed later (ex.: after having seen their injuries, being told the cause of the accident, developing awareness of the risk associated with driving, etc.).

In short, TBI patients experience apparently similar problems to those of BPD patients; however, a deeper look reveals essential differences. Their behavior patterns are mainly the result of neurocognitive damage and the associated perceptions of the real consequences, in contrast to BPDs whose difficulties result from a psychodevelopmental condition which combines: a) relational problems; b) consequent affective dysregulation; and c) massive defensive operations against these conflicts. One of the most distinctive traits of BPD concerns their particular representations of their internal and interpersonal world. Two clinical vignettes will now attempt to illustrate the particular phenomenology of BPD and OPD in patients who both have suffered from TBI.

Vignette no 1

A young woman is described by her family as a strong, assertive, rebellious and "tough" person. In grade school, she reportedly had been the victim of other children's cruelty. For several years during adolescence, she was placed by her parents in a young offender's center because of drug abuse. At age 20, she sustained a moderate head injury in a car accident. Her Glasgow Coma Scale (GCS) score dropped rapidly from 15 to 6/15 during transportation to the hospital and the CT-scan documented a right-frontal contusion. During the acute stage, she was agitated and showed impulsive aggression towards the hospital staff. Several weeks later, the patient reported that she felt as if her family members wanted to lock her up in a psychiatric hospital during the acute stage.

Upon arrival to the rehabilitation center, she was known as a very difficult and emotional patient requiring special care. She demonstrated a very negative reaction to her family situation at that time: her mother was in a foreign country at the time of the accident due to professional obligations and her father was going to leave the country to join his wife, as was planned a long time before the accident. The father left after being reassured that his daughter was out of danger and that she could follow her rehabilitation program by herself and with the support of her three sisters and the rehabilitation team. For the patient, this decision was experienced as a confirmation of her long-held feelings of neglect, particularly by her father. Behind her intense anger towards her parents, she was profoundly sad and felt completely abandoned at the exact moment when she needed them most. The support offered by her siblings, her friends and the rehabilitation team did not match her need for comfort and she felt hopelessly sad.

At the beginning of her psychotherapy, she had a strong feeling that it would not be an answer to her needs. However, she quickly became very much involved in the process, as underlined by the fact that she did not want to change therapists when she was transferred to another rehabilitation center for her professional reintegration. As part of her psychotherapy, the patient could not accept the memory lapses left by her retrograde amnesia. She asked several questions about the circumstances of the accident. She was also very interested

in knowing the therapist's perception about her and the manner in which he was responding to her as a person. She also complained about her emotional lability which in her view created an additional source of difficulty in controlling her emotions. For example, when wanting to talk about her father, she would cry for most of the session without being able to utter a single word. She also reported new episodes of giggling and out-of-control laughter. This new experience contrasted with her premorbid "tough" attitude. She also complained of difficulties to concentrate or to remember what she was doing before being distracted. This was confirmed by objective neuropsychological testing (e.g. mild difficulties noted in the Concentration Endurance D2-Test, the Stroop Test and the Verbal Fluency Test; see Spreen & Strauss, 1998). At the time, she was also very anxious, and she could not handle even small responsibilities such as making a call, shopping or going to her appointments. She felt disorganized and unproductive, and her self-esteem was diminished. During the neuropsychological evaluation, she was able to participate and succeed in most of the tasks. However, she felt frustrated and mistrustful because she was convinced that "testing" would leave her misunderstood and that her needs would be unfulfilled. Testing was thus experienced as a kind of shield used by the therapist to create and maintain a safe distance from her real self as a person.

Not surprisingly then, no rehabilitation goal seemed to satisfy her, nor to meet her needs. Inside of her, she was searching for something else, a kind of special

caring and loving from her family that she did not feel she had ever had or that she felt she had lost. She had high expectations towards her physicians, her rehabilitation team and her insurance company. She demanded "clear" medical answers, fool-proof solutions, and useful rehabilitation material, and she would become very critical and even contemptuously devaluative when frustrated, which invariably recurred. She then felt sorry for herself, as a "victim" of this personal tragedy, misunderstood and abandoned by all, without any understanding and comfort from her family. At the beginning of her program, she was close friends with a woman her age. After this friend made a new boyfriend, however, the patient did not want to see her again because she felt that the woman was no longer a good friend. As far as her siblings were concerned, she only liked the eldest with whom she was in contact.

During the course of her psychotherapeutic process, this patient demonstrated significant psychological progress. Her emotional reactions evolved slowly. She initially resisted going back to her "empty" family house, being afraid of feeling alone. She also resisted reassuming some responsibilities like driving or attending workshops because she did not feel ready. Often she felt trapped between her need to be acknowledged in her multiple wounds and her fear of being misjudged as diminished by others. However, she learned to accept her memory deficits and to utilize some compensatory strategies. She achieved some appropriate distance with regard to the accident. Her perception and expectations towards her family became more objective and realistic. Her

> depressive mood was lightened and in partial remission as she regained some of her self-esteem and self-determination. At the end of therapy, she planned a short trip to see her parents and her anger towards them had diminished considerably. Unfortunately, some residual deficits were still present. She still complained of a fair degree of emotional lability (e.g. giggling), memory problems, fatigue and anxiety while driving or being driven in a car.

This young woman's clinical picture presented intense emotional dysregulation and she was experiencing a real crisis due to her TBI as well as the specific context in which it happened. She clearly felt abandoned by her parents and acted out her anger and frustration by reverting to regressive and dependent behaviors. She was angry, critical and unsatisfied most of the time. She entertained high and unrealistic expectations towards her social surroundings. The relationships with her family and friends were intense, conflictual and unstable. Her perception of others (e.g. friends, father, mother, rehabilitation team, etc.) being incapable of understanding or fulfilling her needs was partly the result of intense projection and her subsequent mistrust of others delayed her rehabilitation process. Her feelings of emptiness were strong enough to make her resist returning home. Once she worked out the deeper psychological motivations and fears associated with her rehabilitation in psychotherapy, she became progressively more independent, positive, assertive and open to see her parents again, and in general to face her new life autonomously. These characteristics correspond to the borderline phenomenology of a developmentally based and characterologically determined PD. By contrast, her emotional lability was

a new condition and can be considered as a primary consequence of the TBI. It differed considerably from her pre-existing "tough" attitude where she was easily able to control both her sadness and laughter. Her new struggle over her sense of lost identity and self-esteem was related to her realistic perceptions of being less organized and less productive compared to her previous capacities. This can be considered as a manifestation of her psychological reactions to her new situation. Because of pre-existing vulnerabilities, her already frail identity and self-esteem lead the patient to a real psychological crisis secondary to the TBI. Consequently, it seems plausible that, besides her labile type of OPD, this woman presented a comorbid BPD (see Table 2).

Please insert Table 2 here

Vignette no 2

This young woman was described by her parents as a sociable, active, sensitive, intelligent and successful student. She was 11 years old when her parents divorced. At the age of 15, she met a new group of friends with whom she started to use drugs and from then on, she experienced major depressive episodes with suicidal attempts and relational conflicts with her mother. She was 16 years old when she sustained a severe TBI following a suicidal attempt in the subway. Her GCS was 3/15, she was in a coma for approximately a month, and the CT-scan revealed among other lesions a right fronto-temporal

hemorrhagic contusion which necessitated a right frontal and anterior temporal lobectomy.

Upon arrival at the post-acute rehabilitation center, she presented many severe behavior disorders requiring a specialized supervision that was maintained for several years following her discharge. Her disruptive behavior was expressed through a massive social and sexual disinhibition. She would try to kiss other patients' visitors, made sexual propositions to complete strangers and had sexual interactions with other patients who were not necessarily consenting. She was intrusive and invasive of the personal space of others, touching private body parts of male therapists, etc. When confronted with those behaviors, she did not seem really concerned about them nor could she offer an explanation for them. She often failed to recognize the potential risk involved in many of her actions. Also disturbing was her continual attention-seeking. She would joke continually, make repeated requests and ask frequent questions which interrupted therapy sessions. She was unable to wait for her turn of speech in a conversation, nor was she able to tolerate any other kind of social interaction besides a one on one, face-to-face meeting, where she could have all the attention for herself. Towards the end of each session, she would cling to her therapist hoping to prolong the session; she would invent stories about herself to maintain her listener's interest, etc. Other behaviors were similar to an oppositional attitude or were more antisocial in nature. She refused to participate in therapeutic activities or to make compromises regarding her

behavior in order to adjust herself to ordinary expectations and rules. When angry, she could set fire to her room or call the police to file a complaint or make false accusations. Finally, she demonstrated short-term motivation. She was interested only in activities which could give her some pleasure; among them, social interactions with people she liked were the most sought-after. In more structured activities, such as goal-oriented tasks involving many steps, her motivation lasted rarely more than fifteen minutes. In spite of a demonstrated ability to succeed, she exhibited great difficulty in getting involved in any therapeutic, leisure or sport activity if it was structured. This motivational problem represented a significant challenge to her rehabilitation program. Closely related to this problem, her poor affect control was of major concern. For example, if she was worried about missing a visit from her mother, she absolutely needed to be reassured several times during the day. She showed some depressive moods and self depreciating verbalizations but those were of short duration, shallow and mostly in response to the current context. She occasionally had angry outbursts directed at her mother, particularly when the latter refused to comply with her excessive requests.

The use of behavioral modification techniques (e.g. positive and negative reinforcements) and social skills training during several months helped this patient to some extent. Specifically, she became more appropriate during social contacts, she listened more carefully, and she was in general more respectful of people with whom she interacted. However, this progress was directly

dependent on a controlled environment; in fact, continuous monitoring and supervision were necessary, particularly in less structured settings, such as an outing. As soon as there was a modification in the environment (ex.: a new therapist in the team or a Christmas party), her behavior disorder would reappear.

Neuropsychological testing of this patient revealed major cognitive deficits: impulsive judgment and reasoning, sustained and shared attention problems, learning difficulties, concrete thinking, and elements of a dysexecutive syndrome in terms of goal formulation or anticipation of the consequences. She needed continual help and prompts in order to complete the tasks she started or not abandon them when they became more complex.

The disinhibited social and sexual behavior of this patient was typical of OPD. It was non selective and grossly inappropriate. This was directly related to several deficiencies in self control, judgment, self-awareness, and the ability to anticipate the consequences of her behavior and to appreciate its impact on others. The impulsivity was not related to a strong and painful feeling as seen in BPD but it appeared as stimulus bound, a concrete attitude, in response to an external stimulus (for example, the simple presence of a male therapist). The patient had lost the normally available frontal inhibition and regulation mechanisms over her sexual impulses and she often seemed to be controlled by them as well as by the environment. Changes in the environment resulted in changes in her behavior. Her sexual impulses might have

been even harder to control given the usual sexual upsurge of her age group. Furthermore, what might look like a massive denial of her behavior disorders was really the result of her anosognosia. She also lost her self-appraisal capacities and, when confronted with her inappropriate behavior, she seemed unconcerned. She could not offer an explanation of her behaviors, as they seemed "meaningless". A more insisting confrontation would have resulted in confusion and guilt, but not a better understanding on her part. She did not integrate nor learn about the consequences of her behavior. Quite the opposite, her behavior was rigid and not easily modified, even by behavioral techniques, notably because it did not have a functional-environmental value. Her attention-seeking behaviors were also typical of the "child-like" attitude seen in OPD. She did not tolerate frustration and she became egocentric, unable to take the perspective of others. Her social skills were also deficient; for example, she was unable to respect the turn of speech in conversation and she failed to detect normal non verbal cues indicating the end of an interaction. Her clinging behavior was not motivated by a need to avoid emptiness or by feelings of abandonment as seen in BPD. Rather, it was more the reflection of her incapacity of inhibiting an immediate gratification and of shifting to another situation.

She did not often experience anger as a main affective expression; it was rarely present and appeared as brief outbursts. In fact, when interacting with people, she would more often than not feel euphoric and excited. Her oppositional attitude seemed to come from her premorbid teenage character but its expression seemed exacerbated and more inadequate. Such cognitive factors as seen in her low tolerance

for effortful activities or towards frustration, and her lack of judgment might account for this exacerbation. As far as affect regulation is concerned, she found it difficult to control her anxiety and when apprehensive, she wanted to be reassured immediately. She at times felt depressed, but these feelings were shallow, brief in duration and situational for the most part. Her poor motivational and affect control was not restricted to social and interpersonal contexts but to all situations in which she could not achieve an immediate goal, as seen in her difficulty to participate in neuropsychological testing, particularly when the tasks were more difficult or lengthy to complete.

Even though she was seeking attention through social interaction, her social life was poor and she became socially isolated. Her cognitive and social limitations discouraged her friends to maintain active relationships with her. Given the temporal context of life events, she could not follow the age-appropriate developmental cycles. However, her identity was not disturbed given her lack of self-awareness. No fears of abandonment, self mutilating behavior or mistrust about others were noted. Even though the impulsivity and the affective instability were flamboyant, these characteristics do not share the phenomenology of BPD and match rather with a diagnosis of OPD, more specifically of a disinhibited type (see Table 2).

Conclusion

BPD and OPD share many emotional and behavioral disturbances at least when examined at a surface level. A closer look however reveals fundamental differences in

their respective phenomenology. We have tried to bring out the most distinctive aspects of both disorders in reference to each DSM-IV criterion. This paper is a first step in our efforts to improve the differential diagnosis between both conditions. It is also seen as an encouragement for neuropsychologists to make more frequent use of the Axis-II PD diagnoses system with the TBI population. A more complete differential diagnosis in TBI patients should be validated with many different sources of information such as clinical observations, functional analysis, semi-structured interviews (ex.: the Revised Diagnostic Interview for Borderlines; DIB-R: Gunderson, Kolb & Austin, 1981), projective instruments (ex.: Social Cognition and Object Relations Scale; SCORS: Westen, 1991), detailed history-taking and neuropsychological testing (e.g. problem solving, initiation and inhibition, planning).

References

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision. Washington, DC: American Psychiatric Association.

Andrulonis, P.A., Glueck, B.C., Stroebel, C.F., Vogel, N.G., Shapiro, A.L., & Aldrigde, D.M. (1980). Organic brain dysfunction and the borderline syndrome. Psychiatric Clinics of North America, 4, 47-66.

Bateman, A. & Fonagy, P. (2004). Psychotherapy for borderline personality disorder: mentalization-based treatment. London : Oxford University Press.

Blumer, D. & Benson, F. (1975). Personality changes with frontal and temporal lobe lesions, In F. Benson & D. Blumer (Eds), Psychiatric aspects of neurological disease (pp. 151-170). New York: Grune & Stratton.

Bond, M. (1984). The psychiatry of closed head injury, In N. Brooks (Ed), Closed head injury: psychological, social, and family consequences (pp. 148-178). Oxford: Oxford University Press.

Brooks, N. (1984). Head injury and the family, In N. Brooks (Ed), Closed head injury: psychological, social, and family consequences (pp. 123-146). Oxford: Oxford University Press.

Brooks, D.N. & McKinlay, W. (1983). Personality and behavioral change after severe blunt head injury – a relative's view. Journal of Neurology, Neurosurgery, and Psychiatry, 46, 336-344.

Brooks, N., Campie, L, Symington, C., Beattie, A., & McKinlay, W. (1986). The five year outcome of severe blunt head injury: a relative's view. Journal of Neurology, Neurosurgery and Psychiatry, 49, 764-770.

Duffy, J.D. & Campbell, J.J. (2001). Regional prefrontal syndromes, In S.P. Salloway, P.F. Malloy, & J.D. Duffy (Eds), The frontal lobes and neuropsychiatry illness (pp. 113-123). Washington: American Psychiatric Publishing.

Eames, P. & Wood, R. (1985). Rehabilitation after severe brain injury: a special-unit approach to behaviour disorders. International Rehabilitation Medicine, 7, 130-133.

Florian, V., Katz, S., & Lahav, V. (1989). Impact of traumatic brain damage on family dynamics and functioning: a review. Brain Injury, 3, 219-233.

Ford, B. (1976). Head injuries: what happened to survivors. The Medical Journal of Australia, 1, 603-605.

Fordyce, D.J., Roueche, J.R., & Prigatano, G.P. (1983). Enhanced emotional reactions in chronic head trauma patients. Journal of Neurology, Neurosurgery, and Psychiatry, 46, 620-624.

Gagnon, J., Bouchard, M.A., Rainville, C., Lecours, S., & St-Amand, J. (2004). Inhibition and object relations in borderline traits after traumatic brain injury. Manuscript in preparation.

Gainotti, G. (1993). Emotional and psychosocial problems after brain injury. Neuropsychological Rehabilitation, 3, 259-277.

Goldstein, K. (1952). The effect of brain damage on the personality. Psychiatry, 15, 245-260.

Grant, I. & Alves, W. (1987). Psychiatric and psychosocial disturbances in head injury, In H.S. Levin, J. Grafman, & H.M. Eisenberg (Eds), Neurobehavioral recovery from head injury (pp. 232-261). Oxford: Oxford University Press.

Griffiths, D.M., Gardner, W.I., & Nugent, J.A. (1998). Behavioral support individual centered interventions: a multimodal functional approach. New York: NADD Press.

Groswasser, Z. & Stern, M.J. (1998). A psychodynamic model of behavior after acute central nervous system damage. Journal of Head Trauma Rehabilitation, 13, 69-79.

Gunderson, J.G. (1984). Borderline personality disorder. Washington: American Psychiatric Publishing.

Gunderson, J.G. (2001). Borderline personality disorder: a clinical guide. Washington: American Psychiatric Publishing.

Gunderson, J.G. & Kolb, J.E. (1978). Discriminating features of borderline patients. The American Journal of Psychiatry, 135, 792-796.

Gunderson, J.G., Kolb, J.E., & Austin, V. (1981). The Diagnostic Interview for Borderline Patients. American Journal of Psychiatry, 138, 896-903.

Gainotti, G. (1993). Emotional and psychosocial problems after brain injury. Neuropsychological rehabilitation, 3, 259-277.

Hart, T. & Jacobs, H.E. (1993). Rehabilitation and management of behavioral disturbances following frontal lobe injury. Journal of Head Trauma Rehabilitation, 8, 1-12.

Hecaen, H. & Albert, M.L. (1975). Disorders of mental functioning related to frontal lobe pathology, In F. Benson & D. Blumer (Eds), Psychiatric aspects of neurological disease (pp. 137-149). New York: Grune & Stratton.

Hibbard, M.R., Bogdany, J., Uysal, S., Kepler, K., Silver, J.M., Gordon, W.A., & Haddad, L. (2000). Axis II psychopathology in individuals with traumatic brain injury. Brain Injury, 14, 45-61.

Hibbard, M.R., Uysal, S., Kepler, K., Bogdany, J., & Silver, J. (1998). Axis I psychopathology in individuals with traumatic brain injury. Journal of Head Trauma Rehabilitation, 13, 24-39.

Howard, M.E. (1988). Behavior management in the acute care rehabilitation setting. Journal of Head Trauma Rehabilitation, 3, 14-22.

Hyman, S.E. (2002). The new beginning of research on borderline personality disorder. Biological Psychiatry, 51, 933-935.

Jarvie, H.F. (1954). Frontal lobe wounds causing disinhibition. Journal of Neurology, Neurosurgery and Psychiatry, 17, 14-32.

Judd, T. & Fordyce, D. (1996). Personality tests, In R.J. Sbordone & C.J. Long (Eds), Ecological validity of neuropsychological testing (pp. 315-355). Florida: St-Lucie Press.

Kernberg, O. (1967). Borderline personality organization. Journal of the American Psychoanalytic Association, 15, 641-685.

Kernberg, O.T. (1975). Differential diagnosis and treatment, In R. Fine (Ed), Current and historical perspectives on the borderline patient (pp. 123-148). New York: Brunner/Mazel.

Kernberg, O.T. (1984). Object-relations theory and clinical psychoanalysis. New Jersey: Jason Aronson.

Kerr, N. (1977). Understanding the process of adjustment to disability, In J. Stubbins (Ed). Social and psychological aspects of disability (pp. 317-324). Baltimore: University Park Press.

Koponen, S., Taiminen, T., Portin, R., Himanen, L., Isoniemi, H., Heinonen, H., Hinkka, S., Tenovuo, O. (2002). Axis I and II psychiatric disorders after traumatic brain injury: a 30 year follow-up study. American Journal of Psychiatry, 159, 1315-1321.

Kraus, M.F. & Levin, H.S. (2001). The frontal lobes and traumatic brain injury, In S.P. Salloway, P.F. Malloy, & J.D. Duffy (Eds), The frontal lobes and neuropsychiatry illness (pp. 199-213). Washington: American Psychiatric Publishing.

Kravetz, S., Gross, Y., Weiler, B., Ben-Yakar, M., Tadir, M., & Stern, M.J. (1995). Self-concept, marital vulnerability and brain damage. Brain Injury, 9, 131-139.

Kreutzer, J.S., Devany, C.W., Myers, S.L., & Marwitz, J.H. (1991). Neurobehavioral outcome following traumatic brain injury: review, methodology, and implications for cognitive rehabilitation, In J.S. Kreutzer & Wehman, P.H. (Eds), Cognitive rehabilitation for persons with traumatic brain injury: a functional approach (pp. 55-71). Baltimore: Paul.H.Brookes Publishing.

Kreutzer, J.S., Gervasio, A.H., & Camplair, P.S. (1994a). Patient correlates of caregivers' distress and family functioning after traumatic brain injury. Brain Injury, 8, 211-230.

Kreutzer, J.S., Gervasio, A.H., & Camplair, P.S. (1994b). Primary caregivers' psychological status and family functioning after traumatic brain injury. Brain Injury, 8, 197-210).

Kreutzer, J.S., Marwitz, J.H., & Kepler, K. (1992). Traumatic brain injury: family response and outcome. Archives of Physical Medicine of Rehabilitation, 73, 771-778.

Kreutzer, J.S., Witol, A.D., & Marwitz, J.H. (1996). Alcohol and drug use among young persons with traumatic brain injury. Journal of Learning Disabilities, 29, 643-651.

Lecours, S. & Bouchard, M.A. (1997). Dimensions of mentalisation: Outlining levels of psychic transformation. International Journal of Psychoanalysis, 78, 855-875.

Levin, H.S. & Grossman, R.G. (1978). Behavioral sequelae of closed head injury. Archives of Neurology, 35, 720-727.

Levin, H.S., High, W.M., Goethe, K.E., Sisson, R.A., Overall, J.E., Rhoades, H.M., Eisenberg, H.M., Kalisky, Z., & Gary, H.E. (1987). The neurobehavioral rating scale: assessment of the behavioral sequelae of head injury by the clinician. Journal of Neurology, Neurosurgery and Psychiatry, 50, 183-193.

Lewis, L. & Rosenberg, S.J. (1990). Psychoanalytic psychotherapy with brain-injured adult psychiatric patients. Journal of Nervous and Mental Disease, 178, 69-77.

Lezak, M.D. (1978) Living with the characterologically altered brain injured patient. Journal of Clinical Psychiatry, 39, 592-598.

Lezak, M.D. (1987). Relationships between personality disorders, social disturbances, and physical disability following traumatic brain injury. Journal of Head Trauma Rehabilitation, 2, 57-69.

Lezak, M.D. (1988). Brain damage is a family affair. Journal of Clinical and Experimental Neuropsychology, 10, 111-123.

Lipowski, Z.J. (1975). Organic brain syndromes: overview and classification, In D.F. Benson & D. Blumer (Eds), Psychiatric aspects of neurological disease (pp. 11-35). New York: Grune & Stratton.

Lishman, W.A. (1973). The psychiatric sequelae of head injury: a review. Psychological Medicine, 3, 304-318.

Lishman, W.A. (1978). The psychiatric sequelae of head injuries: problems in diagnosis. Journal of the Irish Medical Association, 71, 306-314.

Luria, A.R. (1973). The working brain: an introduction to neuropsychology. New York: Basic Books.

Mahler, M.S. (1968). On human symbiosis and the vicissitudes of individuation. New York: International University Press.

Manchester, D., Hodgkinson, A., Casey, T. (1997). Prolonged, severe behavioral disturbance following traumatic brain injury: what can be done? Brain Injury, 11, 605-617.

Masterson, J.F. (1976). Psychotherapy of the borderline adult: a developmental approach. New York: Brunner/Mazel.

Masterson, J.F. (1985). The real self: a developmental, self, and object relations approach. New York: Brunner/Mazel.

Millon, T. & Davis, R. (1995). Conceptions of personality disorders: historical perspectives, the DSMs, and future directions, In W.J. Livesley (Ed), The DSM-IV personality disorders (pp. 3-28). New York: Guilford Press.

Novack, T.A., Daniel, M.S., & Long, C.J. (1983). Factors related to emotional adjustment following head injury. The International Journal of Clinical Neuropsychology, 6, 139-142.

Oddy, M., Coughlan, T., Tyerman, A., & Jenkins, D. (1985). Social adjustment after closed head injury: a further follow-up seven years after injury. Journal of Neurology, Neurosurgery and Psychiatry, 48, 564-568.

Ohry, A., Rattok, J., & Solomon, Z. (1996). Post-traumatic stress disorder in brain injury patients. Brain Injury, 10, 687-695.

O'Shanick, G.J. & O'Shanick, A.M. (1994). Personality and intellectual changes, In J.M. Silver (Ed), Neuropsychiatry of traumatic brain injury (pp. 163-188). Washington: American Psychiatric Press.

Paris, J. (1998). Personality disorders in sociocultural perspective. Journal of Personality Disorders, 2, 189-197.

Parker, R.S. (1996). The spectrum of emotional distress and personality changes after minor head injury incurred in a motor vehicule accident. Brain Injury, 10, 287-302.

Prigatano, G.P. (1986). Personality and psychosocial consequences of brain injury, In G.P. Prigatano, D.J. Fordyce, H.K. Zeiner, J.R. Rouech, M. Pepping, & B.C.

Wood (Eds), Neuropsychological rehabilitation after brain injury (pp. 29-50). Baltimore: John Hopkins University Press.

Prigatano, G.P. (1987a). Psychiatric aspects of head injury : problem areas and suggested guidelines for research, In H.S. Levin, J. Grafman, & H.M. Eisenberg (Eds), Neurobehavioral recovery from head injury (pp. 215-231). New York, Oxford: Oxford University Press.

Prigatano, G.P. (1987b). Neuropsychological deficits, personality variables, and outcome, In M. Ylvisaker & E.M.R. Gobble (Eds), Community re-entry for head injured adults (pp. 1-23). Boston: College-Hill Press.

Salloway, S.P. (1994). Diagnosis and treatment of patients with "frontal lobe" syndromes. The Journal of Neuropsychiatry and Clinical Neurosciences, 6, 388-398.

Segal, B.M. (1990). Interpersonal disorder in borderline patients, In P.S. Links (Ed), Family environment and borderline personality disorders (pp. 27-39). Washington: American Psychiatric Press.

Simpson, G., Tate, R., Ferry, K., Hodgkinson, A., & Blaszczynski, A. (2001). Social, neuroradiologic, medical, and neuropsychologic correlates of sexually aberrant behavior after traumatic brain injury: a controlled study. Journal of Head Trauma Rehabilitation, 16, 556-572.

Skodol, A.E., Gunderson, J.G., Pfohl, B., Widiger, T.A., Livesley, W.J., & Siever, L.J. (2002). The borderline diagnosis I: psychopathology, comorbidity, and personality structure. Biological Psychiatry, 51, 936-950.

Slagle, D.A. (1990). Psychiatric disorders following closed head injury: an overview of biopsychosocial factors in their etiology and management. International Journal of Psychiatry in Medicine, 20, 1-35.

Spatt, J., Zebenholzer, K., & Oder, W. (1997). Psychosocial long term outcome of severe head injury as perceived by patients, relatives, and professionals. Acta Neurologica Scandinavica, 95, 173-179.

Spreen, O. & Strauss, E. (1998). A compendium of neuropsychological tests (2nd edition): administration, norms, and commentary. Oxford: Oxford University Press.

Starkstein, S.E. & Robinson, R.G. (1997). Mechanism of disinhibition after brain lesions. The Journal of Nervous and Mental Disease, 185, 108-114.

Stern, J.M. (1985). The psychotherapeutic process with brain-injured patients: a dynamic approach. Israel Journal of Psychiatry and Related Sciences, 22, 83-87.

Strain, J.J. & Grossman, S. (1975). Psychological care of the medically ill: a primer in liaison psychiatry. New York: Appleton-Century-Crofts.

Stratton, M.C. & Gregory, R.J. (1995). What happens after a traumatic brain injury?: four case studies. Rehabilitation Nursing, 20, 323-327.

Stuss, D.T. & Benson, D.F. (1986). The frontal lobes. New York: Raven Press.

Tate, R.L., Lulham, J.M., Broe, G.A., Strettles, B., & Pfaff, A. (1989). Psychosocial outcome for the survivors of severe blunt head injury: the results from a consecutives series of 100 patients. Journal of Neurology, Neurosurgery and Psychiatry, 52, 1128-1134.

Teichner, G., Golden, C.J., & Giannaris, W.J. (1999). A multimodal approach to treatment of aggression in a severly brain-injured adolescent. Rehabilitation Nursing, 24, 207-211.

Thomsen, I.V. (1984). Late outcome of very severe blunt head trauma: a 10-15 year second follow-up. Journal of Neurology, Neurosurgery and Psychiatry, 47, 260-268.

Tyerman, A. (1984). The problem of personal identity in neurological rehabilitation. Nursing, 23, 679-681.

Tyerman, A. & Humphrey, M. (1984). Changes in self-concept following severe head injury. International Journal of Rehabilitation Research, 7, 11-23.

Van Reekum, R., Bolago, I., Finlayson, M.A.J., Garner, S., & Links, P.S. (1996). Psychiatric disorders after traumatic brain injury. Brain Injury, 10, 319-327.

Weddell, R., Oddy, M., & Jenkins, D. (1980). Social adjustment after rehabilitation: a two year follow up of patients with severe head injury. Psychological Medicine, 10, 257-263.

Westen, D. (1991). Clinical assessment of object relations using the TAT. Journal of Personality Assessment, 56, 56-74.

Westen, D. & Cohen, R.P. (1993). The self in borderline personality disorder: a psychodynamic perspective, In Z.V. Segal & S.J. Blatt (Eds), The self in emotional distress: cognitive and psychodynamic perspectives (pp. 334-360). New York: Guilford Press.

Wood, R.L. (1987). Brain injury rehabilitation: a neurobehavioral approach. Maryland: Aspen Publication.

Zeilig, G., Drubach, A, Katz-Zeilig, M, & Karatinos, J. (1996). Pathological laughter and crying in patients with closed traumatic brain injury. Brain Injury, 10, 591-597.

Table 1

Comparative Phenomenology Between Borderline Personality Disorder (BPD) and Organic Personality Disorder (OPD)

DSM-IV criteria	BPD	OPD
1. Fear of abandonment	Following the other's response	Following the loss of functions of the self
2. Unstable relationships	Unstable and contradictory perceptions of self and other	Perception of the burden for significant others
3. Identity disturbance	Identity diffusion	Identity changed
4. Impulsivity	Purposeful but self-damaging	Lack of control and not necessarily self-damaging
5. Affective instability	Intense and mostly painful dysphoric affects	Shallow and widely different affects (e.g. depression, euphoria, hostility, giggling)
6. Suicidal and mutilating behavior	Conflictual relational context (abandonment depression; persecutory relationships)	Hopelessness in the face of meaningless life context
7. Feelings of emptiness	Intolerance of aloneness	Intolerance of decreased activity post-TBI
8. Anger	Hostile dependency	Reactive, impulsive (organic) or learned aggression
9. Paranoia or dissociative symptoms under stress	Transient and related to past trauma	Long-term and related to cognitive deficits

Table 2

Comparative Phenomenology Between the Two Clinical Vignettes

DSM-IV criteria	Vignette no 1	Vignette no 2
1. Fear of abandonment	In response to the hospitalization and to her parents' trip (BPD)	Absent
2. Unstable relationships	High expectations when needed vs devaluation when frustrated (BPD)	Burden for the others because of her behavior; social isolation (OPD)
3. Identity disturbance	Sees herself as disorganized, unproductive and with low self-esteem (OPD)	Absent
4. Impulsivity	Absent	Gross social and sexual disinhibition with lack of concern for others; constant requests for attention (OPD)
5. Affective instability	Difficulty in controlling her emotions such as crying and giggling post-TBI (OPD)	Motivation based on immediate gratification; poor affect control over short and shallow moods (e.g. anxiety, depression, excitement, euphoria, anger) (OPD)
6. Suicidal and mutilating behavior	Absent	Absent
7. Feelings of emptiness	No rehabilitation goal could satisfy her needs; resistance to go back home because of fear of being alone (BPD)	Absent
8. Anger	Towards parents for leaving her at the hospital when she needed them (BPD)	Impulsive anger (outbursts) (OPD)
9. Paranoia or dissociative symptoms under stress	Mistrustful that her needs would not be fulfilled (BPD)	Absent
Total criteria and Diagnosis	5 BPD and 2 OPD Comorbidity	4 OPD OPD

Article 2

Inhibition and Object Relations in Borderline Personality Traits After Traumatic Brain Injury

Inhibition and Object Relations in Borderline Personality Traits After Traumatic Brain Injury[1]

Jean R. Gagnon

Université de Montréal & Institut de réadaptation de Montréal

Marc-André Bouchard

Université de Montréal

Constant Rainville

Institut Universitaire de Gériatrie de Montréal

Serge Lecours

Université de Montréal

Julie St-Amand

Hôpital Douglas

---

[1] The authors wish to express their gratitude to the Institut de Réadaptation de Montréal, Régis Pearson and Marie Vanier for their exceptional support during the research. They also thank Francine Giroux for her help with data analysis.

Correspondence should be addressed to Jean Gagnon, Institut de réadaptation de Montréal, 6300 ave Darlington, Montréal (Québec), H3S 2J4.

Inhibition and Object Relations in Borderline Personality Traits After Traumatic Brain Injury

Abstract

Traumatic brain injury (TBI) is considered to be a major factor in the development of an acquired Borderline Personality Disorder (BPD). This study aims to assess the severity of borderline traits after TBI and to investigate their relationships with a neuropsychological inhibition deficit as well as a measure of the quality of object relations, a key structural component of personality. Thirty (30) moderate or severe TBI subjects were compared to 30 normal controls on the Revised Diagnostic Interview for Borderlines (DIB-R), the Go-no go inhibition task, Complexity of Representations of People and Affect-Tone Relationships Paradigms scales of the Social Cognition and Object Relations Scale (SCORS), the Beck Depression Inventory (BDI) and two neuropsychological measures, the Verbal Fluency test (VF) and Similarities from de WAIS-III. Premorbid borderline severity estimation was retrospectively measured with the DIB-R. Results indicate that TBIs present more borderline symptoms and traits than controls. However, the severity of borderline symptomatology remains comparatively low for the vast majority. Only 2 (6%) subjects qualify for a true BPD diagnosis on the DIB-R. Moreover, the presence of negative affects seems to reflect the expected psychological reactions toward their challenging post-TBI condition. Both samples present similar profiles on the SCORS measure of object relations. The TBI group performed less well on the Go-no go

inhibition task and the VF test as expected. Finally, the DIB-R was not correlated with the Go-no go task but with the Affect-Tone scale, the BDI, the VF and the premorbid severity estimation. Results suggest that post-TBI borderline traits remain rare but relate more to affective quality of objects relations and premorbid borderline pathology rather than inhibition deficits.

Key words: traumatic brain injury, borderline personality disorder, personality measures, inhibition, object relations, Social Cognition and Object Relations Scale

Inhibition and Object Relations in Borderline Personality Traits After Traumatic Brain Injury

Introduction

As many as two thirds of traumatic brain injury (TBI) subjects are affected by personality changes for periods enduring up to 15 years and more (Bond, 1984; Brooks & McKinlay, 1983; Oddy, Coughlan, Tyerman & Jenkins, 1985; Thomsen, 1984). Associated psychosocial sequelae result from complex relationships between neurocognitive deficits, psychological reactions to the deficits and premorbid personality traits (Gainotti, 1993; Prigatano, 1986). Neuropsychological and personality tests measure and categorize these various emotional and behavioral changes (Judd & Fordyce, 1996). Yet, notwithstanding its essential contribution to our understanding of the specific phenomenology of brain injury patients, a neuropsychological approach alone remains limited in the face of the complex clinical picture that emerges following TBI, the result of multiple interacting factors.

Borderline Personality Disorder (BPD) is characterized by its florid and varied symptoms, including general instability in relationships, self-image and affects, combined with a severe behavioral impulsivity (DSM-IV-TR: American Psychiatric Association, 2000). Two recent studies (Hibbard, Bogdany, Uysal, Kepler, Silver, Gordon & Haddad, 2000; van Reekum, Bolago, Finlayson, Garner & Links, 1996a) found a very high prevalence of post-TBI personality disorders (PD), the so-called

acquired PD. Van Reekum et al. (1996a) found that 39% (7/18) of the TBI subjects without any psychiatric history received a total of 22 PD diagnoses. The most common were BPD (22%; 4/18) and avoidant PD (28%; 5/18). Comorbidity between Axis II disorders was high, with 71% (5/7) of subjects receiving two or more PD diagnoses. These findings point to the necessity of combining a mental health approach with traditional neurocognitive techniques to further our understanding in the hope of improving treatment outcome with this complex clientele.

Confirming these initial observations, using a larger sample divided into two subgroups according to the presence or absence of a pre-TBI PD diagnosis, Hibbard et al. (2000) observed that as many as 55% (42/76) of the subgroup of subjects *without* pre-TBI-PD received an *acquired* PD diagnosis post-TBI, with 33% having two or more PD diagnoses. Interestingly, BPD (28%) and avoidant PD (26%) diagnoses were once again the most commonly observed disorders. Furthermore, 50% (12/24) of the pre-TBI PD subjects received a post-TBI BPD diagnosis. Recently, Koponen, Taiminen, Portin, Himanen, Isoniemi, Heinonen, Hinkka & Tenovuo (2002) found only a 3% prevalence of BDP after TBI. However, post-injury mean age (61 vs. 35 years old) and elapsed time since the injury (30 vs. 8 years) were both much higher compared to the two initial studies. Since it is known that BPD symptoms diminish with age, the differences in the samples used in the studies are crucial and may account for the observed discrepancies. Of importance, Koponen et al. (2002) also found a 15% prevalence of "organic personality syndrome," also referred to as Organic Personality Disorder (OPD), a category not included in the

previous studies. OPD presents features of lability and disinhibition resembling those seen in BPD which could partly account for the apparently high BPD prevalence (Koponen et al., 2002, p. 1319).

Such findings point to the necessity of paying closer attention to BPD phenomena following TBI and trying to ascertain whether post-TBI symptoms truly belong to an actual PD developmental etiology. The preceding studies (Hibbard et al., 2000; Koponen et al., 2002; van Reekum et al., 1996a) did not offer any detailed description of personality traits or symptoms of the post-TBI BPD subjects. Eleven personality changes (ex.: "feel inadequate in new social situation", "fear of loss of approval", "suspects others of harm or deceiving of self", etc.) were endorsed by greater than 30% of post-TBI subjects in Hibbard's study but surprisingly none of them were related to BPD. Moreover, the presence of a major depressive episode in most subjects might have contributed indirectly to the observation of some symptoms attributed to borderline traits (since depressive mood can influence self-image, suicidal behaviors, etc.).

In order to identify borderline personality traits after a TBI, one would need an instrument that measures these traits and their relative importance. Van Reekum et al. (1996a), Hibbard et al. (2000) and Koponen et al. (2002) used either the Structured Interview for Diagnostic Personality-Revised for DSM-III (SIDP-R: Stangl, Pfohle & Zimmerman, 1985) or the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II: First, Gibbon, Spitzer, Williams & Benjamin, 1997) to evaluate

their TBI samples. These contain lists of personality traits that are more restricted than what is required for a complete assessment of the borderline syndrome. Another well established instrument is the Diagnostic Interview for Borderlines (DIB: Gunderson, Kolb & Austin, 1981) and its revised version, the DIB-R (Zanarini, Gunderson, Frankenburg & Chauncey, 1989). Besides its diagnostic value, the DIB-R estimates the severity of borderline features (i.e. dimensional approach vs. categorical approach) by assessing symptoms and behavior patterns describing four central areas of borderline functioning: 1) Affect (ex.: chronic/major depression, chronic anger/frequent angry acts, chronic anxiety); 2) Cognition (ex.: odd thinking, nondelusional paranoid experiences); 3) Impulse action patterns (ex.: substance abuse/dependence, sexual deviance); and 4) Interpersonal relationships (ex.: intolerance of aloneness, stormy relationships, dependency/masochism). In a study discriminating BPD from other PDs using the DIB-R, Zanarini, Gunderson, Frankenburg & Chauncey (1990) found that dysphoric and intense affect is not pathognomonic for BPD because many types of patients with PD also suffer from various serious affective dysregulation. Among the specific pathological traits or markers for BPD were quasi-psychotic experiences in the Cognition section, self-damaging acts and manipulative suicide threats and/or attempts in the Impulse action patterns section, and four markers from the Interpersonal relationships section, specifically abandonment/engulfment/annihilation concerns, demandingness/entitlement, treatment regressions, and the ability to arouse inappropriately close and/or hostile responses in professional caretakers (counter-transference).

No study to our knowledge has systematically contrasted a TBI sample with normal controls using the DIB-R, which would help clarify the issue of borderline pathology following TBI. A relatively high score would be expected to occur in a TBI sample in all four sections: Affect, Cognition, Impulse action patterns and Interpersonal relationships. This is supported by frequent descriptions of long-term "acquired personality changes" following TBI: depressive, moody, anxious, irritable, paranoid, impulsive, presenting substance abuse, unpredictable, childish, and insensitive to the needs of others (Bond, 1984; Brooks & McKinlay, 1983; Hibbard, Uysal, Kepler, Bogdany & Silver, 1998; Lezak, 1978; Oddy et al., 1985; Prigatano, 1986; Prigatano, 1987; Rosenthal, Christensen & Ross, 1998; Seel, Kreutzer, Rosenthal, Hammond, Corrigan & Black, 2003; Thomsen, 1984).

By establishing a BPD diagnosis after head injury, an important and complex issue arises about the specific nature of psychological and/or cognitive features associated with borderline traits seen post-TBI, as well as the specific contribution of premorbid traits to those features. On a purely descriptive phenomenological level, there could be much overlap between BPD symptoms and behavioral changes after TBI (Gagnon, Bouchard & Rainville, 2004). For this reason, it is important to investigate matters beyond possible surface similarities before reaching any firm conclusion. Interestingly, Hibbard et al. (2000, p. 55) suggested that both a combination of frontal lobe disinhibition and ongoing adjustment challenges to the self involved with mourning the loss of the pre-injury self, might account for the high prevalence of

BPD, although no findings are available to support this. The first part of the assertion postulates a strong relationship between TBI disinhibition and BPD impulsivity.

Notwithstanding its common use among clinicians and its central place in many theories regarding psychology of personality, impulsivity is an inconsistently defined concept and its span ranges from a rapid, poorly planned response style revealed in test taking to overt behaviors central to diagnosis (i.e. at the level of syndrome or disorder) (van Reekum, Links & Fedorov, 1994). Behaviors or inferred processes commonly used to define impulsivity include: 1) the tendency to execute actions too quickly or in an unreasoned or unreflective manner; 2) difficulties withholding actions or inhibiting actions once they have been commenced; and 3) the tendency to seek out immediate gratification at the expense of longer-term goals (see Zaparniuk & Taylor, 1997). Factor analysis models identified many impulsivity-related dimensions assessed by frequently used impulsivity measures (see Parker & Bagby, 1997). There are three broad dimensions related to impulsivity: 1) the tendency to engage in spontaneous behaviors or to have spontaneous thoughts (acting without thinking, restlessness, distractibility, quick-decision-making ability, impatience); 2) the tendency to be disorganized and unprepared in day-to-day activities; and 3) the presence of "carefree" or "happy-go-lucky" attitudes.

There are several methods to assess impulsivity and these can be classified into two categories: self-report measures and behavioral approaches. One of the well-established self-report measures, the 10th Revision of the Barratt Impulsiveness Scale

(BIS-10: Barratt, 1993), includes three subscales: Motor, Cognitive and Non-planning. The Motor scale measures the tendency to engage in spontaneous behavior and represents the behavioral dimension of impulsivity (11 items: ex.: "I do things without thinking"). The Cognitive scale assesses the tendency to make quick decisions and refers to potential difficulties during intellectual tasks (11 items: ex.: "I like to reflect on complex problems"). The Non-planning scale involves a lack of concern for the future or for the consequences of one's actions (12 items: ex.: "I am more interested in the present than in the future"). Behavioral approaches can be grouped into two different types of laboratory measures. The first utilizes various reaction time tasks and the second utilizes different time perception tasks (see Parker & Bagby, 1997). There is a common observation in the literature that different measures of impulsivity are often uncorrelated with one another, especially measures based on different sources of information (Zaparniuk & Taylor, 1997). Impulsivity lacks diagnostic specificity because it is a principal diagnostic feature in many categories of mental disorders, including BPD (Coles, 1997). The impulsivity in the earlier mentioned DIB-R Impulse action subscale is measured by evidence of substance abuse, sexual deviance, self-mutilation, manipulative suicidal efforts or threats, and a general category that includes accident proneness, eating binges, spending/gambling sprees, poor temper control, fights, threats/assaults, reckless driving, and antisocial behavior.

In neuropsychology, inhibition has been described as playing a major role in cognitive performance in various domains like perception, selective attention,

memory and motor processes (Kok, 1999). Inhibition is defined as "the suppression of previously activated cognitive contents or processes, the clearing of irrelevant actions or attention from consciousness, and resistance to interference from potentially attention-capturing processes or contents" (Bjorklund & Harnishfeger, 1990, p. 143). After an extensive review of the neurocognitive and personality literatures, Nigg (2000) proposed a taxonomy of inhibition that posits three fundamental classes relevant to psychopathology research: 1) *executive inhibition effects* are defined as processes for intentional control or suppression of response in the service of higher order or longer term goals; 2) *motivational inhibition effects* refer to bottom-up interruption of ongoing behavior or suppression of behavior response due to fear or anxiety in the presence of an immediate novel social situation or cues for punishment; and 3) *automatic inhibition* plays a role in the suppression of attentional orienting response and oculomotor saccade. Among the four processes that fall under executive inhibition effects, behavioral inhibition plays an important role in social and motor control by suppressing a prepotent automatic, prepared or cued response.

A traditional task in neuropsychological research to evaluate intentional motor inhibition is the Go-no go task (Nigg, 2000). Subjects are required to press a key whenever a target stimulus is presented and to refrain from pressing the key when a nontarget stimulus is presented. Pressing the key in the latter condition (an error of commission) is considered to be an impulsive response or an inability to inhibit responses to the "no-go" signal. Poor performance on this task has been associated

with frontal dysfunctions as is observed after TBI (Levin & Kraus, 1994), frontal lobe tumor (Leimkuhler & Mesulam, 1985), Alzheimer disease (Collette, Van der Linden, Delrue & Salmon, 2002), psychopathy (Lapierre, Braun & Hodgins, 1995), schizophrenia (Kiehl, Smith, Hare & Liddle, 2000) and attention deficit hyperactivity disorder (Nigg, 2000). To our knowledge, no group study has systematically compared TBI subjects with controls on the Go-no go task in order to investigate motor skills inhibition. A modified Go-no go task has been used to investigate the effects of TBI on phasic arousal responses, a subcomponent of attention. In this version of the task, an auditory or visual warning presented at various pre-stimulus intervals failed to discriminate patients and controls regarding the facilatory impact of warnings (White, Fleming, Polansky, Cavallucci & Coslett, 1997, 1998).

Based on observations of adult subjects following frontal lobe damage, disinhibition is traditionally described as a disturbance of the mechanisms responsible for the control of behavior in its social setting (Jarvie, 1954, p. 14). Disinhibition types can be grouped into different categories: *motor disinhibition* (e.g. hyperactivity, pressured speech, decreased need of sleep), *instinctive disinhibition* (e.g. hypersexuality, hyperphagia, aggressive outburst), *emotional disinhibition* (e.g. euphoria, elation, irritability), *intellectual disinhibition* (e.g. grandiose and paranoid delusions, flight of ideas), and/or *sensory disinhibition* (e.g. visual and auditory hallucinations) (Starkstein & Robinson, 1997). Most patients present with a mixture of these disinhibition categories. Rating instruments such as the Neurobehavioral Rating Scale (NRS) describes behavioral disinhibition as socially inappropriate comments and/or

actions, including aggressive/sexual content, or inappropriate to the situation, outbursts of temper (Levin, High, Goethe, Sisson, Overall, Rhoades, Eisenberg, Kalisky & Gary, 1987). Disinhibition and behavioral disturbances can be seen with or without intellectual/neuropsychological impairments (Eslinger & Damasio, 1985; Lishman, 1978).

In a study addressing impulsivity to be considered as one of the core features of BPD, van Reekum, Links & Fedorov (1994) found significant correlations between DIB/DIB-R and other measures of impulsivity (interview-based and self-report measures) which assess emotional impulsivity (ex.: anger, resentment, suspicion, guilt), suicidal behaviors and motor impulsiveness, the latter been measured by the Motor scale of the BIS-10. Given its striking resemblance to symptoms seen in frontal lobe syndromes, the observation of motor impulsiveness suggests a biological basis for BPD and a strong relationship between borderline impulsivity and frontal disinhibition. In a BPD sample, van Reekum, Conway, Gansler, White & Bachman (1993) noted significant correlations between a retrospective DIB score (Armelius, Kullgren & Renberg, 1985; the DIB revised for chart review) and a total brain injury score (including both the developmental and acquired brain injury scores) as well as between the Affect subscale and both the acquired and the total brain injury scores. In a controlled group study, van Reekum, Links, Finlayson, Boyle, Bolago, Ostrander & Moustacalis (1996b) reported significant correlations between DIB score and history of developmental and combined total brain injury (developmental and acquired injuries). Furthermore, trend correlations were seen between DIB score and acquired

injury score (r = .35), total cognitive performance score (r = -.39) and frontal cognitive score (r = -.37); the latter was derived from the average of the percent scores for the frontal tests (Rey Osterrieth Complex Figure; Consonant Trigrams Test; Wisconsin Card Sorting Test; Trail B; Incompatible Conditional Discrimination Task: ICD; Object Alternation Task: OA; see van Reekum et al. 1996b). The ICD and OA tasks involve selective attention and inhibition processes. Finally, comparisons between BPD and TBI groups revealed no significant differences on these neuropsychological tests.

The hypothesis stipulating that a cognitive deficit is an underlying feature of BPD impulsivity has recently gained popularity in the hope of improving our understanding of this core BPD trait and its specific treatment (Lemelin & Villeneuve, 2003). Two studies have used laboratory-based behavioral measures in relation to BPD impulsivity. Dougherty, Bjork, Huckabee, Moeller & Swann (1999) used a delay of gratification task and found no significant differences between BPD and controls. By contrast, Hochhausen, Lorenz & Newman (2002) used a Go-no go passive avoidance task with incarcerated women. The passive avoidance task measures the ability to inhibit punished responses (e.g. losing ten cents) by asking the subject to press a button whenever he/she thinks that the stimulus (a two-digit number) is a winning number and not answering whenever he/she thinks that it is a losing number. The subject must learn by trial and error to discriminate a series of ten numbers (five winning numbers and five losing numbers), presented one at a time, each number being repeated nine times. Pre-experimental rewarded trials are

introduced in order to establish a dominant response set, or inclination to respond, by providing a high probability of winning numbers. Results showed significantly more errors of commission (impulsive responses) in BPD than non BPD subjects and suggested that disinhibition is a feature of impulsivity present in BPD. In order to evaluate Hibbard's hypothesis that a similar relationship between disinhibition and borderline impulsivity exists in TBI subjects, one should establish whether or not any correlations are present between borderline traits seen in TBI subjects and performances on neuropsychological tests. Due to the learning difficulties often present in the TBI population, a traditional Go-no go task would be preferable with these subjects as opposed to the Go-no go passive avoidance task which requires learning the stimuli in order to know when to inhibit a motor response.

From a psychological perspective, in Hibbard's study, identity disturbance was associated with grief due to the perceived loss of the former self. Post-trauma assessment of personality traits and symptoms would thus reflect a reaction to the new and difficult situation rather than a deep change in personality structure. This assertion is given some support by reports of stability in premorbid personality traits after TBI which was measured with the revised NEO Personality Inventory (NEO PI-R: Kurtz, Putnam & Stone, 1998). It has been suggested that pre-existing borderline personality traits can be potential predictors of poor outcome in the TBI population (Ruff, Camenzuli & Mueller, 1996). With a modified version of the SCID-II querying the onset of personality changes relative to the onset of TBI, Hibbard et al. (2000) found that 24% of subjects presented with one or more PDs before the injury, which

is a significantly greater prevalence than expected from community-based samples. Yet, only 1% of the subjects presented a pre-TBI BPD. One could speculate that the so-called "post-TBI BPD" subjects presented with pre-existing sub-threshold BPD traits, which a categorical approach using diagnostic instruments such as the SCID-II did not reveal. This would suggest that a dimensional approach to BPD phenomena, which would estimate the severity of all pre- as well as post-TBI borderline features such as provided by the DIB-R, might clarify the issue.

From a psychoanalytic perspective, the structure of personality refers to: 1) the specific character configuration of the ego in relation to the other two components of id and superego; 2) the cognitive (primary versus secondary processes) and defensive structures (constellation of defense mechanisms and the defensive aspects of character); and 3) the structural derivatives of internalized object relationships (Kernberg, 1967, pp. 659-660). Psychotherapeutic observations in TBI patients suggest that "individuals who have attained a high level of ego organization, with attendant coherence in their sense of self and a refined capacity to modulate and experience emotion and conflict, will manifest a *different symptomatic picture* following neurological trauma than those whose prior adjustment had been at a borderline level of ego organization" (Lewis & Rosenberg, 1990, p. 71). Brain-injured patients whose pre-existing level of ego organization was in the borderline range will more likely experience anxiety and painful emotions, present more intense struggles with self-esteem and identity issues, and experience therapy as a burden or as a threat consequent to their difficulty to use ideation and self-reflection in the

service of adaptation. Their dependency needs will be more intense, and they may tend to devaluate and express more univocal anger towards the therapist. Clinical experience confirms the existence of trait similarities (e.g. identity disturbances as suggested by Hibbard) but also of *differences* between TBI and BPD proper subjects. TBI subjects typically retain a stable image of others, while temporarily entertaining a highly unstable image of self, in contrast to BPD patients whose internal images of *both* self and others are unstable and contradictory (Gagnon et al, 2004). This suggests a different personality structure for post-TBI subjects than BPD proper subjects but more empirical data are necessary to substantiate this further.

One way to move beyond surface similarities and better understand the psychological features associated with borderline traits after TBI would call upon the concept of object relations (OR). An OR is an internal combined cognitive-affective structure, often observed in the form of a fantasy representation of the self, involved in any form of motivational-affective action (ex.: positive, negative, defensive, etc) which involves the representation of another. An abundant literature postulates that highly affectively charged and intense, contradictory pathological object relations significantly contribute to the instability typical of BPD (Kernberg, 1967, 1975, 1984; Masterson, 1976, 1985; Westen, 1991a; Westen & Cohen, 1993). Several OR measures have been developed (Dymetryszyn, Bouchard, Bienvenu, de Carufel & Gaston, 1997; see also Smith, 1993 for a review). Among them, Westen's (1991b) Social Cognition and Object Relations Scale (SCORS) is perhaps the best suited as it attempts to integrate cognitive psychology and object relations theory within a

coherent framework. Substantial evidence establishes its validity across several populations and diverse materials (Westen, 1990). Two scales are relevant. The Complexity of Representations of People scale was designed to assess the extent to which a subject is able to distinguish the perspective of the self and the other, and is able to appreciate their complex, subjective and psychological experiences. In pathological development, the normal shift in Complexity of Representations from concrete and external attributes to an emphasis on the internal and intentional mode fail to occur (Leigh, Westen, Barends, Mendel & Byers, 1992). The Affect-Tone of the Relationship Paradigms scale was designed to assess the extent to which a subject expects malevolence and pain or benevolent and enriching relationships from others.

These scales would be two distinct key features inherent in the psychopathological structure of BPD. Using the SCORS, coded from the Thematic Apperception Test (TAT: Murray, 1943), it has been shown that BPD patients scored significantly lower on notably the Complexity of Representations of People and the Affect-Tone of Relationships Paradigms scales compared to controls and lower only on the latter compared to nonborderline major depressive patients (Westen, Lohr, Silk, Gold & Kerber, 1990). BPD patients score even lower on Affect-Tone as compared to Complexity. The Affect-Tone scale is more sensitive to borderline psychopathology than the Complexity scale as shown by its power to discriminate between "borderline major depressive patients" and "nonborderline major depressive patients" (Westen, Lohr, Silk, Gold & Kerber, 1990). Its relation to the severity of psychopathology measured by the Minnesota Multiphasic Personality Inventory (MMPI: Hibbard,

Hilsenroth, Hibbard & Nash, 1995) and the Millon Clinical Multiphasic Inventory (MCMI-II: Porcerelli, Cogan & Hibbard, 1998) has also been established. The Complexity scale is related to depression (Westen et al., 1990), IQ (Hibbard et al., 1995) and verbal productivity (Leigh et al., 1992). Graduate students in psychology were shown to form more complex representations of people, compared to natural sciences graduate students (Westen, Huebner, Lifton, Silverman & Boekamp, 1991). To our knowledge, no study has yet applied the SCORS to a neurological sample. It would seem important to administer the SCORS to a TBI population in order to evaluate these two important structural features of BPD (Affect-Tone and Complexity) and their contribution to borderline traits observed after brain injury.

This study first aimed to present a more systematic and complete description of borderline symptomatology following TBI. We measured the degree of borderline pathology using the DIB-R. Two key features of the quality of object relations were evaluated by the SCORS whereas motor impulsivity was evaluated with the Go-no go paradigm. These cognitive and object relations features, as well as borderline symptomatology, were also measured on a group of non-TBI paired controls. A second related aim was to document whether the various borderline traits actually increase post-TBI compared to the pre-TBI situation. A third objective was to investigate the relationships between borderline symptomatology and traits measured by the DIB-R and the following variables: 1) intentional motor inhibition measured by the Go-no go task; 2) Complexity of Representations of People and Affect-Tone of Relationship Paradigms of OR measured by the SCORS; 3) depressive symptoms

measured by the Beck Depression Inventory (BDI: Beck, 1987); 4) neuropsychological measures of verbal productivity and verbal reasoning measured by the Verbal Fluency test (VF: Cardebat, Doyon, Puel, Goulet & Joanette, 1990) and the Similarities test of the third edition of the Weschler Adult Intelligence Scale (WAIS-III-S: Wechsler, 1997); and 5) severity of brain injury measured by the Glasgow Coma Scale (GCS) as well as demographic variables such as age and educational level. It was hypothesized that more borderline phenomena would be exhibited by TBI subjects than by controls, and that borderline traits would be more numerous post-TBI than pre-TBI. It was also predicted that controls would perform better on neuropsychological tests including the Go-no go task. Also, assuming that TBI produces significant changes in the structural components of personality, it was expected that these changes would be reflected in lower scores on both Complexity and Affect-Tone for TBI subjects compared to controls. A significant correlation was predicted between the DIB-R and the Go-no go inhibition score. Finally, both Complexity and Affect-Tone are expected to be correlated with borderline DIB-R scores and the BDI index, but only the Complexity index is expected to be correlated with such neuropsychological measures as VF and WAIS-III-S.

Method

Subjects

Subjects in the TBI group were recruited from a list of patients who have completed their TBI rehabilitation program between the years 1986 and 2000 at the Institut de Réadaptation de Montréal (IRM), a special treatment hospital offering intensive

functional rehabilitation services. The following inclusion criteria were used: a) a moderate or severe TBI diagnosis; b) which had occurred at least one year prior to the study in order to ensure that post-TBI behavioral changes are stable; c) the TBI must have occurred at or above the age of 16; d) the subject's current age must be below 60; e) subjects had to show sufficient motor, language, perceptual and memory skills to allow for valid testing; f) subjects had to be living in the community (none were hospitalized). Exclusion criteria were: a) a pre-TBI neurological or psychiatric history of an axis II personality disorder in the medical records; b) a severe mental or intellectual incapacity preventing a full consent as revealed by the presence of a psychosis, mental retardation or protective supervision mentioned in the medical record. Among the 169 medical records consulted, 83 subjects met the selection criteria and of the 53 that were successfully contacted by telephone and invited to participate, 32 subjects agreed. The subjects who refused to participate or that were not successfully contacted were compared to our TBI sample and found to be similar in terms of sex (73% of male, 27% of females), age (average = 38 years old) and severity of injury (GCS: average = 9.91/15). In the end, 30 subjects, 25 French-speaking and 5 English-speaking, completed all requirements of the study (30/83 = 36%).

Severity of the injury was established by the attending physiatrist and was based both on the Glasgow Coma Scale score (GCS: average = 8.15/15, range 3-13/15) and on a positive cerebral scan. GCS scores were missing for 3 subjects but all subjects received a diagnosis of severe (n = 17) or moderate (n = 13) TBI. Duration of coma

and post-traumatic amnesia were unavailable in the majority of cases. Retrograde amnesia (measured by asking the patient his most recent memory prior to the event leading to the TBI) ranged between 0 and 36 months (average = 3.48 months, SD = 8.97). One patient could not give a precise pre-TBI memory but could clearly remember and describe his usual behavioral and emotional patterns. All subjects lived at home except for one who lived in a foster home. Table 1 presents the demographic information for both TBI-subjects and control groups.

Please insert Table 1 here

In this sample, 14 (47%) TBI subjects sustained injury as the result of a motor vehicle accident, 9 (30%) through falls, 4 (13%) in a road traffic accident as a pedestrian or while riding a bike and 3 (10%) were assaulted. Average age at the time of the TBI was 32.7 years (SD = 13.25). The average post-injury elapsed time was 3.3 years (SD = 3.15), which compares with van Reekum et al. (1996a: 4.9 years). Information regarding sites of injury was obtained from written interpretations of computerized tomography scans as located in the medical records. Findings can be regrouped into two categories: a) 23 subjects (77%) were given diagnoses involving two or more areas of the brain -- there was some known frontal involvement in most (i.e. 20; 67%); b) 7 of the subjects (23%) were given specific diagnoses involving only one area of the brain -- temporal damage occurred in 4 (13%) of these. One patient also had a right cerebrovascular accident (CVA, dissection of the right internal carotid

artery). One patient had suffered from a concussion at age 19 (2 years prior to a severe TBI) without any residual difficulty. Eleven subjects (37%) reported a pre-TBI history of either substance abuse or substance dependence; all but one had refrained from taking any such substance at least 1 year prior to testing. Seven subjects (23%) reported a pre-TBI history of at least one Axis I psychiatric problem with or without a formal diagnosis (4 experienced a depressive episode, 2 presented with a bipolar profile, 1 had suffered from a unspecified anxiety episode); of the 7 patients, 5 had consulted a psychiatrist and 2 had been hospitalized in a psychiatric hospital for a depressive episode. No subjects in this group reported having a pre-TBI psychotic disorder. Nineteen patients were taking medication during testing -- mostly anti-convulsive or anti-depressive medications in 33% and 20% of the subjects respectively; one subject was taking Lupron in order to diminish his sexual disinhibition. Informed consent was obtained from each participant in the study.

Eight subjects presented with either a dysarthria or partial hemiparalysis, or with a visual field deficit or limitations in binocular vision. All subjects (TBI and control subjects) were assessed prior to the formal testing in order to establish if they had the prerequisites required by the experimental tasks (see inclusion criteria). The following tests were used: 1) Boston Naming Test (BNT: a visual denomination task; Kaplan, Goodglass & Weintraub, 1983); 2) Protocole Montréal-Toulouse d'Évaluation des Gnosies Visuelles (PEGV: a visual interference perceptual task with overlapping figures; Agniel, Joanette, Doyen, Duchein et al., 1992); 3) the Logical Memory test from the Revised Weschler Memory Scale (WMS-R-LM: a test of

verbal memory - immediate recall condition; Wechsler, 1987); and 4) the Matrices test from the WAIS-III (WAIS-III-M: a non verbal reasoning task; Wechsler, 1997). Two subjects could not complete this set of preliminary tasks (a score of 2 SD below the mean of the reference group at two tasks or more) and were eliminated. The average scores on these measures for TBI and control groups were as follows: 1) BNT: TBI = 53.2/60 (SD = 4.54); controls = 54.77/60 (SD = 4.72); 2) PEGV: TBI = 8.47/10 (SD = 1.85); controls = 9.2/10 (SD = 0.93); 3) WMS-R-LM: TBI = 39.33/75 (SD = 10.91); controls = 45.13/75 (SD = 8.88); and 4) WAIS-III-M: TBI = 18.03/26 (SD = 4.58); controls = 20.07/26 (SD = 3.76). No significant difference was observed between the two groups on the BNT ($t_{(58)} = -1.31$, $p = 0.195$). Marginally significant differences were noted between controls and TBI average scores on PEGV ($t_{(58)} = -1.94$, $p = 0.057$) and WAIS-III-M ($t_{(58)} = -1.879$, $p = 0.065$). The control group's Logical Memory scores was significantly higher than the TBI average score ($t_{(58)} = -2.258$, $p < 0.05$).

Controls

A paired-comparison control group was formed of 30 adults, 29 French-speaking and 1 English-speaking, recruited among hospital employees or friends and family of either patients or employees. Each control subject was paired with a TBI subject according to gender, age and level of education. In addition, none of the control group subjects reported any TBI history. Three cases reported having experienced a concussion before the age of 10 which however resulted in no residual problem. One participant reported a Bell transient facial paralysis without any cognitive incidence.

No participant in the control group reported having received an Axis II personality disorder. Six controls (20%) reported a history of substance abuse or dependency, all of whom except for one having refrained from either drugs or alcohol at least 1 year prior to testing. Four subjects reported an Axis I history, with or without a formal diagnosis of depression; of the 4 patients, 1 had consulted a psychiatrist and none had ever been hospitalized in a psychiatric hospital. All participants were free from medication.

Close Relatives

All subjects, in both TBI and control groups, provided the names of a close relative who agreed to participate in the study by answering a brief questionnaire concerning the subject's attitudes, actions and feelings (SCID-II; see description below) via a telephone interview. This was planned as an additional important source of information to validate the data provided by the participants concerning their emotional and behavioral functioning. The nature of their relationship to participants was as follows: parent (TBI: 50% vs. controls: 13%); sibling (TBI: 30% vs. controls: 23%); spouse (TBI: 17% vs. controls: 37%); friend (TBI: 3% vs. controls: 10%); other, such as grand-parent, child, etc. (TBI: 0% vs. controls: 17%).

Measures

As part of the experimental protocol per se, all TBI and control subjects were administered the following interviews and tests.

Diagnostic Interview for Borderlines-Revised (DIB-R)

The DIB-R (Zanarini et al., 1989) is a 60 minute semi-structured interview initially conceived to diagnose the presence of borderline personality disorder. It also provides a dimensional perspective on borderline traits by quantifying the severity of BPD on a 0 to 10 scale, with a score of 8 and over indicating a BPD diagnosis (sensitivity = .82; specificity = .80; positive prediction power = .74; negative prediction power = .87). The DIB-R has an inter-rater coefficient ranged from .70 to .80, a test-retest validity of .71, and discriminates BPD from other axis II disorders (Bouvard, 2002). The instrument is divided into four sections: Affect, Cognition, Impulse action patterns and Interpersonal relationships. The Affect section includes such chronic dysphoric emotions as depression, helplessness, anger, anxiety and loneliness/emptiness. The Cognition section comprises odd thinking/unusual perceptual experiences, nondelusional paranoid experiences and quasipsychotic experiences. The Impulse action patterns section includes substance abuse/dependence, sexual deviance, self-mutilation, manipulative suicidal efforts and other impulsive patterns (ex.: fist fight, reckless driving). The last section concerns Interpersonal relationships and covers intolerance of aloneness, abandonment concerns, counterdependency/serious conflict over help or care, stormy relationships, dependency/masochism, devaluation/manipulation/sadism, demandingness/entitlement, treatment regressions, countertransference problems. Each section is scored separately, and contributes to the total DIB score. The DIB-R (French translation: Guttman & Laporte, 1993) has been modified in the present

study in order to compare the pre- and post-TBI functioning of these subjects. Thus for each question, the subject was asked to answer once by considering his/her typical behavior for the last 2-3 years prior to TBI (with the exception of 2 subjects who presented a retrograde amnesia over 3 years), and once by considering it in the past year (post-TBI). Each response is scored as 0 (never happened or "absent"), 1 (happened occasionally or "probable") or 2 (happened often or "present") according to the frequency of the behavior or the emotion. The DIB has been validated with retrospective diagnoses from medical records (Armelius et al., 1985) and has been used in the present study to also evaluate the severity of pre-TBI borderline traits. For all TBI subjects, two scores are calculated, one for the pre-TBI and one for the post-TBI functioning (one score only for the controls).

15 questions from the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II)

The SCID-II (First et al., 1997) is a well-established semi-structured interview which can be used to evaluate the presence of dysfunctional personality traits and personality disorders based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV: American Psychiatric Association, 1994) criteria. A modified version of the SCID-II questions for BPD was administered to the close relatives during the telephone interview. For each item, two answers were required from the close relative or friend of TBI subjects: one while considering the pre-TBI behaviors and attitudes, the other following the TBI. Respondents were asked to consider a time frame of approximately 2-3 years before the TBI and a time frame of at least one year

after the TBI. Each item was scored as either "absent" (0), "occasional or probable" (1), or "often present" (2), with a total score ranging from 0 to 30. The SCID-II was not used here as a diagnostic instrument but as a global severity score to confirm the global results obtained from the TBI subjects.

In addition to the 15 questions, close relatives were asked to describe in their own words the subject's personality traits before and after the TBI. The answers were categorized according to the subtypes of "Personality change due to a general medical condition" of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM 4th Edition-Text Revision: American Psychiatric Association, 2000, p. 187), the so-called OPD.

Social Cognition and Object Relation Scale (SCORS)

The SCORS (Westen, 1991b) is composed of different scales devised for assessing different dimensions of object relations notably from TAT responses. Two scales were chosen from the SCORS according to their importance in the borderline object relations. The Complexity of Representations of People scale includes three developmental phenomena for which there is a large agreement among object-relations theorists: 1) increasing differentiation between self and object representations; 2) increasing complexity of representations; and 3) increasing capacity to integrate multivalent representations. The Affect-Tone of Relationship Paradigms scale represents the affective coloring of the object world (from malevolent to benevolent), an important dimension of the representations underlying

interpersonal functioning implicitly used by theoreticians of borderline personality disorders. While the Complexity scale measures a dimension that develops with age, the Affect-Tone scale assesses the malevolent object world of the BPD subject which presumably reflects his/her own intense aggression (Kernberg, 1975) and, by reversal, it reflects the withholding, abandoning maternal object who can leave the person helpless, empty, profoundly alone, and abandoned (Masterson, 1976). Each scale has five levels, ranging from 1, indicating the presence of the more pathological responses, to 5, suggesting the presence of the more adaptive responses. These two scales were applied to stories obtained with seven cards from the Thematic Apperception Test (TAT) (Cards 1, 2, 3BM, 4, 13MF, 15 and 18GF) following Westen's et al. (1990) procedure. The TAT is a well known and long established projective instrument developed by Murray (1943) to assess various components of personality functioning. It is composed of a series of black and white drawings presented in card form illustrating one or several female or male characters of varied ages involved in various ambiguous transactions or situations. The participant is instructed to tell a story for each card by describing, according to his perception, what is happening, how did the situation start and how it will end. Participants are also prompted to describe what the characters may be thinking and how they might feel. In order to minimize any possible biases from the subject's cognitive difficulties, subjects who failed to spontaneously tell what the characters were thinking or feeling (or any other omissions relative to the instructions) were prompted to do so during the test. Separate scores for both Complexity and Affect-Tone scales were obtained by averaging scores on all seven cards.

Go no-go test

The Go no-go test measures response inhibition and is sensitive to frontal involvement as revealed by functional magnetic resonance imagery (Langenecker & Nielson, 2003) and event-related electrical potentials (Jackson, Jackson & Roberts, 1999). Capital letters P and R were presented on a McIntosch Powerbook G4 with "Psyscopeversion 1.0" allowing for standardized presentation of stimuli as well as recording of reaction time in milliseconds. Discriminating between the letters P and R was the chosen task given their similarity (van der Meere & Stemerdink, 1999). Each letter was 1 mm wide and 6 mm in height and was presented one at a time in white bold Arial 24 on a black screen with a visual angle of 0.29 degrees X 0.72 degrees from a 40 cm distance. A trial is composed of either letter P or R presented for 1000 ms followed by an interval of 500 ms. The subject is asked to press any key on the keyboard as quickly as possible each time the letter P appears on the screen while refraining from a response when the letter R appears, which is presented on 20% of trials. Once the subject presses a key, the stimulus disappears, followed by another presentation, after a 500ms delay. In the absence of a response, the stimulus is presented for a maximum of 1000 ms. Both reaction time and the occurrence of a presumably impulsive response to the letter R are calculated. There are a total of 250 trials, grouped into two equal blocks. A brief practice block of 15 trials precedes the task. As a further check of the subject's capacity to discriminate between the two letters and produce a response, both letters are presented to the subject before being introduced to the proper task.

Other Measures

In order to obtain brief independent measures of their current cognitive and affective functioning, all subjects completed: 1) the BDI (Beck, 1987); 2) the WAIS-III-S (Wechsler, 1997), a verbal reasoning test in which the participant is required to explain in his own words how two things are alike; and 3) the VF (Cardebat et al., 1990), a verbal response initiation test wherein each participant is required to produce, within a 2 minute period each, as many words as possible either beginning with the letter P or belonging to the category of animals. Verbal fluency measures are known to be highly sensitive to frontal lobe lesions in humans (Levin & Kraus, 1994) and deficits have been shown in TBI subjects (Sarno, 1980).

Procedure

Participants were met individually for one or two sessions, either at home or at the IRM according to their preference. The meeting began with an unstructured interview comprising of questions aimed at completing their medical history, particularly concerning their present use of medication and their history of neurological problems, alcohol or drug intake, and psychiatric disorders. They were also asked about their last memory prior to the TBI in order to estimate the extent of their retrograde amnesia. Testing was initiated by administration of the Go no-go test, followed by the TAT, the DIB-R and the other cognitive and affective measures (BNT, PEGV, WMS-R-LM, VF, WAIS-III-S & M and BDI). The TAT was given before the DIB-R to minimize any biases raised by questions concerning pathological behaviors and

emotions. The telephone interview with the close relatives or friends was held after participants completed the protocol. DIB-R interviews were conducted by an experienced psychologist (with 10 years of experience), following training with another psychologist who has considerable experience with both the DIB-R and BPD. Administration of the DIB-R was not blind as to the participant's group status due to the necessity for the TBI subjects to review their pre- and post-TBI behaviors and attitudes (which was not asked of the paired-controlled subjects for obvious reasons).

TAT stories (420) were coded by a first coder, while 20% (84) of these, randomly selected, were independently coded by a second rater, following extensive training prior to the study using Westen's scoring manual (Westen, 1985) and TAT cards. In addition, coders met on four occasions, at regular intervals during the coding process to discuss independently scored responses and also in order to prevent coder drift as well as to resolve discrepancies. Each TAT interview was recorded on audiotape and transcribed following rules suggested by Westen et al. (1990). Transcribed TAT protocols were assigned a confidential number and each rater was blind as to the participant's group. Coders received the stories in random order so that rating multiple stories for the same participant would be entirely independent. Reliability was computed using Pearson correlation analysis and the average reliabilities for the two scales were as follows: Complexity of Representations of People, 0.70 ($p < 0.01$); Affect-Tone of Relationships Paradigms, 0.82 ($p < 0.01$).

Results

Distributions

Distributions on all measures were visually inspected. As expected, a negative skew was noted on total DIB-R and SCID-II scores distributions for the control group but responses were judged to be sufficiently normal to justify the use of parametric analysis. Further, given that the DIB-R scale is meaningful and widely used, no data transformation was performed.

Borderline traits

A t-test conducted on average total DIB-R scores revealed that TBI scores were significantly higher than control scores ($M_{TBI} = 2.8$, $SD = 2.25$; $M_{Controls} = 1.3$, $SD = 1.8$; $t_{(58)} = 2.807$, $p < 0.01$). Two TBI subjects (6.6%; 1 male, 1 female) met the diagnostic criteria of BPD (score ≥ 8) and none in the control group. It is important to note however that, overall, the intensity of borderline pathology cannot be considered severe in the TBI group. Most of the TBI subjects received a score of 3 or less on a 10 point scale: 0 (10%), 1 (23%), 2 (23%) or 3 (13%) while the majority of the controls received a score of 0 (43%) or 1 (30%). Graph 1 shows the frequency distribution for TBI and control groups for each total DIB-R score. Comparing both groups on each DIB-R scale, one finds significantly more dysphoric Affect ($M_{TBI} = 1.00$, $SD = 0.69$; $M_{Controls} = 0.40$, $SD = 0.49$; $t_{(58)} = 3.84$, $p < 0.001$) and more difficulties in Interpersonal relationships ($M_{TBI} = 0.73$, $SD = 1.08$; $M_{Controls} = 0.13$, $SD = 0.51$; $t_{(58)} = 2.75$, $p < 0.01$) amongst the TBI subjects, while the Cognition ($M_{TBI} = 0.63$, $SD = 0.76$; $M_{Controls} = 0.47$, $SD = 0.73$; $t_{(58)} = 0.86$, $p = 0.392$) and

Impulse action patterns (M_{TBI} = 0.43, SD = 1.00; $M_{Controls}$ = 0.33, SD = 0.80; $t_{(58)}$ = 0.43, p = 0.672) scales are equivalent.

Please insert Graph 1 here

Table 2 shows the number of TBIs and controls who exhibited a clinical feature (score of 2) in the 22 Summary Statements of the DIB-R. Chi-square statistic between-group comparisons corrected for continuity were conducted. A significantly higher percentage of TBI subjects than control subjects were judged to have exhibited three clinical features: chronic-major depression, helplessness-hopelessness-worthlessness-guilt feelings and chronic loneliness-boredom-emptiness. The percentage of TBI subjects who reported chronic anger-frequent angry acts and chronic anxiety was marginally higher than that of the controls. Those affective traits are the less discriminative ones of BPD (Zanarini et al., 1990). Interestingly, for three features considered as more specific to BPD, the percentage of TBI subjects were higher than controls but the number of observations stayed below threshold: manipulative suicide efforts (23.3% TBIs vs 3.3% controls), demanding-entitlement (13.3% TBIs vs 0% controls) and countertransference problems (10% TBIs vs 0% controls). In fact, the frequency of suicide efforts in this TBI sample (23%) is higher than that found elsewhere in other PDs (13.6%: Zanarini et al., 1990) underlining its clinical value. Nonetheless, the percentage of TBI subjects on these three features stays much lower than that found in true BPDs (manipulative suicide efforts: 55.8%;

demanding-entitlement: 68.3%; countertransference problems: 63.3%: Zanarini et al., 1990). Among the other features considered as BPD markers, only the abandonment concerns were frequently reported by TBI subjects (23.3%) but not significantly more often compared to controls (10%). No TBI subject exhibited quasi-psychotic thought and self-mutilation while only one met the "regression during treatment" clinical criterion (score of 2), which are considered as specific BPD features. Only one specific BPD feature, abandonment concerns, was reported by the two TBI subjects who received a BPD diagnosis, and one of these two exhibited suicide efforts. It is worthwhile to note that more controls reported having Cognitive (ex.: thinking-unusual perception experiences) and Impulsive features (ex.: substance abuse-dependence) than TBIs but no difference was significant.

Please insert Table 2 here

Respondents of both groups produced convergent observations. A t-test conducted on the average total SCID-II scores indicated that close relatives of the TBI group reported significantly higher scores than the control group ($M_{TBI} = 13.0$, $SD = 7.58$; $M_{Controls} = 3.8$, $SD = 4.76$; $t_{(58)} = 5.626$, $p < 0.001$). Table 3 shows the number of TBIs and controls who received from their close relative a score of 2 (e.g. pattern frequently observed) from answers to the SCID-II Questions. A significantly or marginally significant higher percentage of the TBIs' close relatives than that of the

controls reported a score of 2 on 8 of the 15 questions (Chi-square statistic corrected for continuity; see Table 3).

Please insert Table 3 here

Personality changes among TBI subjects as reported by close relatives were noted in 17 (57%) subjects and can be documented as follows (each subject could be attributed more than one category): 13 labile (43%), 8 disinhibited (27%), 8 aggressive (27%), 5 others (17%), 3 apathetic (10%), and 2 paranoid (7%). The first three categories share similarities with BPD. Thirteen TBI subjects (43%) were described as having no personality change or were seen as having improved in one aspect or another of their personality (ex.: more peaceful).

In short, compared to controls, TBI subjects showed only a few and non specific borderline symptoms and/or traits related to their negative affects. Their relationships also seemed more problematic than controls. However, it is less clear to establish which behavior patterns differentiate both conditions. Some specific BPD traits such as a demanding attitude and an ability to arouse inappropriately close and/or hostile responses in professional caretakers is occasionally seen in TBI subjects, and more often than in controls, but never as frequently as in BPD subjects. Finally, it remains unclear whether the equivalence between groups with respect to Cognitive and

Impulsive features results from a low impact of the TBI or if it is the case that those features were abnormally high in our sample of controls.

Premorbid borderline traits in the TBI group

Given their retrospective nature, the following exploratory data must be interpreted with caution. The TBI group showed significantly higher borderline traits post-TBI compared to their pre-TBI level of functioning ($M_{pre\text{-}TBI} = 1.87$, $SD = 2.33$; $M_{post\text{-}TBI} = 2.80$, $SD = 2.25$; $t_{(29)} = -1.874$, $p < 0.05$ (one-tailed)). Clinically, this difference indicates a minor augmentation of severity. It is noteworthy that post-TBI scores are significantly higher than pre-TBI score on Affect ($M_{pre\text{-}TBI} = 0.33$, $SD = 0.55$; $M_{post\text{-}TBI} = 1.00$, $SD = 0.69$; $t_{(29)} = 4.13$, $p < 0.001$) and Cognition ($M_{pre\text{-}TBI} = 0.30$, $SD = 0.59$; $M_{post\text{-}TBI} = 0.63$, $SD = 0.76$; $t_{(29)} = -2.16$, $p < 0.05$) but not on Impulse action patterns ($M_{pre\text{-}TBI} = 0.73$, $SD = 1.17$; $M_{post\text{-}TBI} = 0.43$, $SD = 1.01$; $t_{(29)} = 1.16$, $p = 0.256$) and Interpersonal relationships ($M_{pre\text{-}TBI} = 0.50$, $SD = 1.04$; $M_{post\text{-}TBI} = 0.73$, $SD = 1.08$; $t_{(29)} = 1.16$, $p = 0.257$). For the Impulse section, scores lowered but not significantly from pre- to post-TBI to join the level of the controls. No correlation was found between a possibly diminished Impulse action patterns score post-TBI and possession of a driver's license which rules out this potential explanatory factor ($r = .15$). Respondents' perceptions confirm a similar pattern since the average total SCID-II score raised to 13.00 ($SD = 7.58$) following the TBI from a 7.43 ($SD = 6.33$) pre-TBI score ($t_{(29)} = -3.91$, $p < 0.001$).

In brief, TBI subjects perceived an increase in borderline traits compared to their premorbid functioning, mostly in their dysphoric affects and in their higher suspiciousness (Cognition). With respect to the results presented earlier, nondelusional paranoia was higher (but not statistically significant) than controls, while odd thinking-unusual perception experiences and quasi-psychotic thought were equivalent across conditions. It seems that this control group was peculiarly high on those points. Otherwise, TBIs did perceive themselves as less impulsive since the injury but that decrease was not significant. More controls showed substance abuse-dependency than TBIs (trend only), supporting the decrease observed in TBI subjects. Even though TBIs may appear to show more problematic interpersonal relationships in both pre- and post-TBI contexts than controls, they did not report having more conflicts since the injury.

Group comparison on inhibition, object relations, neuropsychological measures and on depression index

As expected, the TBI group performed less well on the Go-no go test and on the VF test. Subjects were significantly slower as seen by longer mean reaction time (M_{TBI} = 411.47, SD = 55.19; $M_{Controls}$ = 374.40, SD = 46.03; $t_{(58)} = 2.83$, $p < 0.01$), and made more commission errors (M_{TBI} = 8.37, SD = 6.10; $M_{Controls}$ = 6.03, SD = 3.37; $t_{(58)}$ = 1.83, $p < 0.05$ (one tailed)). TBIs were also less fluent in both conditions than controls (letter P: M_{TBI} = 17.77, SD = 6.23; $M_{Controls}$ = 24.13, SD = 7.78; $t_{(58)}$ = -3.499, $p < 0.001$; animals: M_{TBI} = 22.97, SD = 6.91; $M_{Controls}$ = 30.50, SD = 7.94; $t_{(58)}$ = -3.920, $p < 0.001$), confirming the well-known response initiation and inhibition

impairments in TBI subjects (Levin & Kraus, 1994). Both groups demonstrated similar abstract verbal skills ($M_{TBI} = 23.33$, SD = 5.52; $M_{Controls} = 23.27$, SD = 5.07; $t_{(58)} = 0.49$, $p = 0.96$), also confirming the better-established intact verbal intelligence functions in TBI subjects (Brooks, 1984; Levin, Grossman, Rose & Teasdale, 1979).

Also as expected, the level of reported depressive symptomatology as measured by the BDI was higher among the TBI subjects than control subjects ($M_{TBI} = 10.47$, SD = 8.01; $M_{Controls} = 2.67$, SD = 4.01; $t_{(58)} = 4.768$, $p < 0.001$). However, the average score indicates that, overall, the TBI group remains in the normal range according to the scoring rules (Beck, 1987). The level of severity was distributed as follows for the TBI subjects: minimal depression (6 or 20%), mild-to-moderate (2 or 7%), moderate-to-severe (4 or 13%) and severe depression (1 or 3%). Eleven of the 21 questions (symptom severity mild, moderate or severe) were endorsed by greater than 30% of this sample, thus reflecting the most common depressive symptoms experienced by TBI subjects. Nine of the 11 questions relate to non somatic items suggesting that the BDI was measuring "real" psychopathology and not only somatic complaints (Sliwinski, Gordon & Bogdany, 1998). The most frequent items were the following: "tire easily" (25 or 83%), "work well" (23 or 77%), "cry more" (18 or 60%), "decision making" (18 ore 60%), "sleep" (17 or 57%), "low satisfaction" (16 or 53%) and "feel irritated" (16 or 53%). Almost all controls scored in the normal range (28 or 94%); two subjects scored minimal or mild to moderate depression. No item was endorsed by 30% of the control sample.

By contrast, groups showed no difference on both Complexity of Representations of People (M_{TBI} = 2.62, SD = 0.55; $M_{Controls}$ = 2.77, SD = 0.48; $t_{(58)}$ = 1.103, p = 0.27) and Affect-Tone Relationship Paradigms (M_{TBI} = 2.74, SD = 0.49; $M_{Controls}$ = 2.69, SD = 0.43; $t_{(58)}$ = 0.39, p = 0.69) mean scores. This would indicate that the two key features of the structural quality of object relations are equivalent between groups.

Intercorrelation among measures

In order to substantiate the validity of our present measures of borderline pathology compared to neuropsychological tests and other psychiatric indexes of symptomatology, Pearson correlations between various measures were performed separately for each group: 1) DIB-R total score and section scores; 2) SCID-II total score; 3) DIB-R pre-TBI total score; 4) Go-no go task mean reaction time and number of commission errors; 5) Complexity of Representations of People (SCORS) mean score; 6) Affect-Tone Relationship Paradigms (SCORS) mean score; 7) BDI total score; 8) VF -- letter P total score; 9) VF -- animals total score; 10) WAIS-III-S total score (verbal reasoning); 11) Glasgow Coma Scale Score (GCS); 12) age; and 13) education level (years). First, one notices that the DIB-R (one main indicator of borderline traits) total score (DT: see Table 4) positively correlates, as expected, with other dysfunctional personality traits and depression symptomatology. A closer examination indicates that for TBI subjects, the DIB Impulsivity section is most related to the SCID-II index, whereas the Affect, Impulsivity and Interpersonal relationships sections are correlated with the BDI, while the correlation for the Cognition symptoms do not quite reach the required statistical reliability. Further, it

makes sense to find a modest but significant correlation exclusively between the pre- and post-Interpersonal relationships section score, as this section should perhaps indicate the most stable structure. For control subjects, both the Impulsivity and Cognition sections relate to the SCID-II index, while depression strongly correlates with the Impulsivity scale and moderately with the Interpersonal relationship items.

Please insert Table 4 here

The capacity for motor inhibition is totally unrelated to the DIB-R scores, including the Impulsivity section, in both groups. This indicates the need to differentiate clearly between one neuropsychological concept of impulsivity with a definite motor component, and a clinical concept of impulsivity as measured by the DIB, which indicates more macroscopic action patterns with a definite role in regulating affect (self-mutilation, substance abuse, sexual deviance, reckless driving, etc.). As expected, Affect-Tone is negatively correlated to borderline traits, although marginally for the TBI group. The premorbid SCID-II score is related to Affect-Tone ($r = -.37$, $p < 0.05$[2]) but not to Complexity ($r = .10$, $p = 0.59$). Thus, it seems that the less negative are the expectations in the object relations world, the lower is the DIB index. The affect quality of the object relations seems also related to the level of premorbid functioning. In both groups, the SCORS index of Complexity is unrelated to borderline traits but, as expected, there are some correlations with the

[2] this correlation and the ones that follow are not included in table 4

neuropsychological measures. For TBIs, it marginally correlates with WAIS-III-S verbal reasoning ($r = .31$, $p = 0.09$) and for controls, it relates to VF initiation scores ($r = .41$, $p < 0.05$, letter P condition; $r = .39$, $p < 0.05$, animal condition). So, the Complexity index seems to be more sensitive to cognitive and intellectual skills than to psychopathology. Finally, the DIB-R shows no correlation with most other measures, as expected, with two exceptions. First, we note positive correlations with VF ($r = .40$, $p < 0.05$, animal condition and DIB-R total score; $r = .41$, $p < 0.05$, animal condition and Interpersonal relationships section score; $r = .37$, $p < 0.05$, letter P and DIB-R Affect section score) for the TBI group. Verbal fluency is otherwise correlated with other neuropsychological measures: WAIS-III-S verbal reasoning ($r = .51$, $p < 0.01$) and mean reaction times at the Go-no go test ($r = -.44$, $p < 0.05$). TBI subjects who scored below the median on VF (letter P condition) showed significantly lower negative affects than subjects who scored above the median (DIB-R Affect section score: $TBI_{lowVF} = 0.73$, $SD = 0.70$; $TBI_{highVF} = 1.27$, $SD = 0.59$; $t_{(28)} = -2.24$, $p < 0.05$). This may support the observation that patients with such neuropsychological deficits as slow speed processing, apathy, and concrete thinking, may experience more difficulty in perceiving psychological and relational problems and thus complain less about them (Levin et al., 1979). Second, a negative relationship was found between education level and the DIB total score ($r = -.44$, $p < 0.05$), Impulsivity ($r = -.36$, $p < 0.05$) and the BDI score ($r = -.56$, $p < 0.001$) for the TBI group. This seems to indicate that the borderline impulsivity of TBI subjects was more related to psychosocial and depressive factors than a response inhibition of neuropsychological origin.

In order to better understand the above-mentioned relationships between (i) depressed mood and the Impulsivity scale as well as (ii) depressed mood and the Interpersonal relationship scale, subjects who scored above the median on the BDI (n = 13) were compared to those who scored equal or below the median (n = 17) by using t-tests with Bonferroni adjustment. There is no significant difference observed between the two TBI subgroups on any of the five Impulsive Summary Statements of the DIB-R or on the Impulsive section score. It seems that, even though these two factors are related, the relationship is a complex one. When the two TBI subgroups are compared on the Interpersonal relationships Summary Statements, the more depressed subjects score significantly higher on "fear of abandonment" (S.15: $TBI_{more\text{-}depressed} = 1.15$, SD = 0.89; $TBI_{less\text{-}depressed} = 0.23$, SD = 0.56; $t_{(28)} = 3.43$, $p < 0.01$), countertransference problems (S.22: $TBI_{more\text{-}depressed} = 0.54$, SD = 0.87; $TBI_{less\text{-}depressed} = 0.00$, SD = 0.00; $t_{(28)} = 2.54$, $p < 0.05$), and on the Interpersonal relationships section score ($TBI_{more\text{-}depressed} = 5.54$, SD = 2.98; $TBI_{less\text{-}depressed} = 3.12$, SD = 2.17; $t_{(28)} = 2.57$, $p < 0.05$). It seems that the depressed mood of TBI subjects relates particularly to the fear of abandonment. Otherwise, among the more depressed subjects, some are more able to inappropriately stimulate responses in professional caretakers. Finally, subjects who scored above the median on the premorbid DIB-R score (n = 12) were compared to those who scored equal to or below the median (n = 18) on each Interpersonal relationships Summary Statement. Premorbid high-borderline-trait subjects score significantly or marginally higher than premorbid low-borderline-trait subjects on "stormy relationships" (S.17: $TBI_{high\text{-}traits} = 0.75$, SD = 0.87; $TBI_{low\text{-}traits} = 0.28$, SD =

0.57; $t_{(28)} = 1.80$, $p = 0.082$), on "treatment regressions" (S.21: $TBI_{high\text{-}traits} = 0.25$, SD = 0.62; $TBI_{low\text{-}traits} = 0.00$, SD = 0.00; $t_{(28)} = 1.72$, $p = 0.096$), on "countertransference problems" (S.22: $TBI_{high\text{-}traits} = 0.50$, SD = 0.90; $TBI_{low\text{-}traits} = 0.05$, SD = 0.23; $t_{(28)} = 2.001$, $p = 0.055$) and on the Interpersonal relationships section score ($TBI_{high\text{-}traits} = 5.50$, SD = 2.71; $TBI_{low\text{-}traits} = 3.27$, SD = 2.54; $t_{(28)} = 2.28$, $p < 0.05$). This indicates that premorbid borderline traits represent a high risk of experiencing specific borderline relationship conflicts after a head injury. Moreover, since depressed mood relates to countertransference problems, and countertransference problems relate to premorbid borderline traits, than it only follows that among the more depressed subjects, the ones who are able to stimulate inappropriate countertransferences in professional caretakers most likely present premorbid borderline traits. Although clinically significant, these observations nevertheless remain relatively rare among TBI patients.

Discussion

As expected, TBI subjects presented more borderline traits and symptoms than controls. Contrary to van Reekum et al. (1996a) and Hibbard et al. (2000) however, the difference in terms of severity remained small and below the usual clinical threshold required to establish a diagnosis of BPD. This finding does not support the contention that subjects with TBI are at a greater risk to develop a BPD than controls. More specifically, the presently observed 6% of BPD after a TBI does not match the high percentages (22 and 28%) found in earlier studies (Hibbard et al., 2000; van Reekum et al., 1996a). Further, the DIB-R, a more detailed and presumably valid

instrument to assess BPD was used here as the key diagnostic instrument, in contrast to van Reekum et al. (1996a) and Hibbard et al. (2000) who used the SIDP-R and SCID-II respectively (108 questions summarized in 22 statements vs. 10 to 15 questions evaluating 9 DSM-IV criterions). In addition, the DIB-R offers more opportunities to establish a valid differential diagnosis between BPD and OPD following a TBI. Moreover, because Hibbard and van Reekum's studies did not consider OPD as a possible (even likely) diagnosis, it is plausible that in their sample, some OPD subjects presenting features of lability and disinhibition resembling those seen in BPD would have been misdiagnosed as borderlines, thus accounting for the high BPD prevalence in their reports. Indeed, when formally considering the possibility of an OPD diagnosis, Koponen et al. (2002) found only 3% of BPD, a similar percentage to the present study. Given that a BPD diagnosis is much more frequent in females than males (up to 85% of cases; Stone, 1990), discrepancies in findings might also reflect different female/male ratios between samples: van Reekum's study had a ratio of 3:1 and Hibbard'study had a ratio of about 1:1 whereas it was 1:2 in the present study (a more representative ratio for the TBI population).

Borderline traits and symptoms of our TBI subjects belonged most definitely to the affective realm: more TBI subjects than controls presented feelings of depression, helplessness-hopelessness-worthlessness-guilt, anger, anxiety, and loneliness-boredom-emptiness. Depression, anxiety and irritability (Bond, 1984) as well as feelings of loneliness, boredom and worthlessness (Lezak, 1987) have been reported as the most common emotional reactions after a TBI. These dysphoric affects are not

specific to borderline phenomenology (Zanarini et al., 1990). This interpretation is in line with other findings, such as the observed relationship between the DIB Affect section score and the prevalence of brain injury (van Reekum et al., 1993). TBI subjects also presented more relationship problems of a borderline type (DIB-R Interpersonal Relationships scale) than controls but it was not possible to identify any specific patterns. Contrary to what was expected, both groups were similar on the DIB-R Cognition and Impulse action patterns scales. This equivalence might be attributed to methodological artifacts to some extent. About 17% of controls reported having had a substance abuse/dependency compared to 7% of TBIs. This might reflect that controls had a wider range of time in answering this question -- up to 3 years before the current testing, perhaps even more as it is possible that some controls may not have paid careful attention to the specific instruction concerning the time-limited range which was the focus of the question. This compared to the more limited 1 or 2 years for 30% of the TBI subjects who are necessarily restricted by their post-injury range of time. This range would correspond to the transient decline in alcohol use during the first years after a TBI (Kreutzer, Witol & Marwitz, 1996). Nonetheless, Hibbard et al. (1998) also noted a decrease of the frequency of Substance Use Disorder with a group 7 years post-TBI. Regarding this disorder, individuals without pre-TBI Axis I DSM-IV disorders (ex.: mood, anxiety, substance use disorders) were three time more numerous than individuals with such mental disorders but rates of resolution (i.e. percentage of individuals with current diagnosis compared to percentage of individuals who were diagnosed with an Axis I disorder post-TBI) were similar in both groups. Although it was not suggested by Hibbard et

al. (1998), such a decrease of substance use disorder might reflect changes of values toward pre-existing maladaptive patterns. A similar decrease was found in the present TBI sample and will be discussed below. Furthermore, almost 27% of controls reported to have odd-thinking-unusual perception experiences, a finding that might require some qualification in presenting this sample as "normal".

Contrary to Hibbard's hypothesis, and as seen in the DIB-R Impulsivity section scores, TBIs and controls exhibited similar levels and patterns of impulsivity, a core feature of "pseudo borderline" pathology. Nonetheless, TBIs showed, as expected, more Go-no go impulsive responses than controls. This contrasting finding raises some doubts about the presumed overlap between: 1) borderline and TBI impulsivity; and also between 2) borderline impulsivity and the neuropsychological disinhibition response. Clearly, it seems that true borderline impulsivity should be distinguished from TBI impulsivity on both phenomenological and operational levels. Borderline impulsivity is a more functional, controlled and context-appropriate form of impulsivity than the one exhibited by TBI patients (Gagnon et al., 2004). Self-mutilating behavior, known as a key differentiating BPD impulsive feature, is totally absent in this TBI sample. In addition, there was no relationship between the Go-no go inhibition score (our main index of the neuropsychological disinhibition response) and the DIB-R nor between the inhibition score and the DIB-R Impulsivity score. This finding does not support observations of various relationships between the DIB-R, frontal score, motor impulsiveness and disinhibition found in BPD samples (Hochhausen et al., 2002; van Reekum et al.1994; 1996b). In other words, our

observations support the conclusion that the neuropsychological disinhibition process as measured by the Go-no go task and Impulsivity as measured by the DIB-R constitute two concepts which are not overlapping and should be carefully differentiated, at least in reference to the TBI population. Obviously, more studies are necessary to further clarify the relationship, if any, between borderline impulsivity and neuropsychological disinhibition. Borderline impulsivity after TBI seems to relate more to developmental and not purely contemporary neuropsychological deficits but a complex interaction between both sets of determinants seems possible. With the present sample, emotional, psychological and even psychosocial factors appear to be more relevant. More depressed TBI subjects exhibited more impulsivity than less depressed ones, but this relationship cannot be accounted for by a single factor such as suicidal efforts or substance abuse. Differences in personal adjustment might account for the variation among subjects. For example, it has been reported that many TBI subjects give up their premorbid heavy drinking and are more sober because their brain injury lowers their threshold for intoxication (Bond, 1984). This could also be motivated by a realization of the negative consequences associated with alcohol. This view is supported by the fact that 43% of our TBI sample was described by their close relatives as having experienced no personality change or even as showing some improvement in their personality compared to their previous level. Finally, since level of education relates negatively to depression severity and impulsivity, it is possible that the less educated subjects experienced more maladjustment patterns, however, the nature of this relationship needs to be further investigated.

Unexpectedly, at least as far as what was suggested by the original hypothesis held by van Reekum and Hibbard, TBI subjects and controls were similar on both Complexity of Representations of People and Affect-Tone Relationships Paradigms scales. This suggests that the non conscious representational world of TBI subjects is less affected by the brain damage itself. The way patients see themselves and others, and the extent to which they expect malevolent or benevolent responses from others are not deeply influenced by neurological deficits. Assuming, as van Reekum and Hibbard did, that TBI individuals are more at risk to develop an acquired BPD would imply that some of the psychopathological processes underlying these traits would be similar to true BPDs who are well-known for their immature object relations. The reason why this structural component of personality would be less affected by a TBI remains to be investigated. Following Westen (1990), it may be speculated that following a TBI, the automatically activated working representations – which are coded both verbally and non-verbally and which can be activated during an interaction -- are not in themselves conflictual (contrary to true borderlines) and do not require an effortful and controlled processing. This might explain why, compared to controls, TBI subjects score lower on conscious social cognition scales (Levine, Van Horn & Curtis, 1993; Van Horn, Levine & Curtis, 1992) but at a similar level on non conscious object relations scales. Furthermore, the observation of a significant but weaker relationship between the Affect-Tone score and borderline severity among TBIs compared to that of controls, supports the relevance for differential diagnosis of measures of structural functioning and object relating such as the SCORS in TBI

subjects, and thus extends its usefulness to the TBI population. The weaker link found in TBI subjects might reflect influences coming from other cognitive factors such as concrete thinking; such a deficit could, for example, lower the level of activation among working representations during the TAT.

As expected from the literature, borderline traits increased as a result of TBI. For instance, negative affects and nondelusional paranoia increase compared to premorbid functioning, but this augmentation does not lead to a clinically significant level of borderline pathology among TBI subjects. It has been suggested that TBI subjects develop mistrust towards the social environment after repetitive failures of social adaptation (Prigatano, 1986). Of interest is our present observation that overall premorbid borderline traits (from the DIB-R or SCID-II measurements) were related to Affect-Tone (SCORS) as well as Relationships (DIB-R) scales. This suggests that premorbid borderline pathology influences the quality of object relations with respect to both the internal and external object world. Previous attempts to establish a relationship between several premorbid factors and post-TBI outcome have failed. For example, Kozol (1945) found no difference in the frequency of mental and psychiatric symptomatology reported by subjects classified premorbidly as having a normal personality compared to those rated as having a diagnostic profile. More recently, Tate (1998) failed to find a difference on the Glasgow Outcome Scale or level of psychosocial reintegration (overall outcome measures) between groups which were distinct from their indices of premorbid social maladjustment or from their premorbid personality as measured by the Eysenck Personality Questionnaire-

Revised (EPQ-R). Our present finding might reflect a major difference between measuring *symptoms*, which are highly variable and transient, and *traits* which are more stable structurally determined and more resilient in the face of typical TBI as studied here. Another difference might relate to outcome measures, as overall measures are probably less sensitive to the establishment of specific relations, while the present study involves two realms which are both conceptually related to one another and to borderline pathology: conflicts in relationships (DIB-R) and quality of object relations (SCORS). Moreover, even though the phenomenon was rare, a difference was found between groups on three specific borderline features -- stormy relationships, regression treatment and countertransference problems -- according to their level of premorbid overall borderline psychopathology. Whereas the brain injury itself is more related to affective non specific borderline traits, the premorbid borderline personality traits might relate to more specific borderline features. This finding supports the contention that the level of pre-existing ego organization influences symptomatology after TBI, notably in the relational area, as indicated also by clinical observation (Lewis & Rosenberg, 1990).

Results from the SCID-II borderline questionnaire as reported by close relatives converged with the TBIs' DIB-R results to confirm the presence of more frequent borderline traits in TBIs than in controls. Indications from close relatives using SCID-II criteria showed that Identity disturbances are significantly higher in TBIs than controls. This result supports the notion that identity issues contribute to the TBI borderline phenomenology (Hibbard et al., 2000). Contrary to the SCID-II, the DIB-

R does not contain a specific index for identity issues, which might explain why this criterion did not emerge from the subjects' responses.

Finally, the TBI subjects performed less well on the neuropsychological tests sensitive to frontal initiation and inhibition, these being the VF test and the Go-no go task. These two tests are expected to be sensitive to frontal brain injury (Levin and Kraus, 1994). With regard to personality changes after TBI, about 57% of the subjects were described as changed by their close relatives, which compares to the two thirds ratio reported in the literature (Brooks & McKinlay, 1983; Oddy et al., 1985; Thomsen, 1984).

This study addresses a number of diagnostic issues regarding TBI patients since several behavioral manifestations which are part of a post-TBI syndrome mimic borderline traits (Gagnon et al., 2004). In this respect, it is important to rely on several sources of information to achieve better reliability and accuracy. For clinical purposes, the DIB-R semi-structured interview could be completed using information gathered from psychotherapy observations, neuropsychological measures and such object relations scales as the Affect-Tone scale of the SCORS, as applied to projective personality tests. The DIB-R should be considered as a more reliable and valid diagnostic instrument of true borderline pathology versus OPD when compared to the SCID-II. Diagnosing BPD after TBI would lead to a more efficient psychological intervention combined with traditional neuropsychological compensatory strategies in relation to the specific needs of these patients. In addition,

it would lead to more realistic rehabilitation goals by working with these long-term relational problematic patients. Numerous long-term depressive and reactionary symptomatologies found in the present sample many years post-injury remind us of the importance of paying attention to the subjective experience of the individual and working through the grief response to post-TBI loss of functions in psychotherapy.

It is clear that borderline impulsivity seen after brain injury entertains diverse relationships with many different factors and cannot be reduced to neuropsychological disinhibition. What seems most relevant is the influence of the premorbid functioning in the post-TBI borderline traits. Westen's model of the quality of affect in object relations organized in automatically activated networks should help to understand the contribution of premorbid borderline pathology to post-TBI borderline phenomena as they seem to be more stable after a TBI and related to pre-injury as well as post-injury BPD overall severity. Premorbid overall DIB-R estimation might represent a potential predictor of borderline relationships outcome and prepares the rehabilitation team to what is coming in the rehabilitation process in terms of the characteristic defensive style of these patients (ex.: regression, countertransference problems, devaluation, idealization).

This study presents some important limits. First, an independent measurement of "borderline" impulsivity is lacking as the Go-no go task measures a specific form of disinhibition that seems irrelevant to the construct of "borderline" impulsivity. Various instruments are available, like the Barratt Scale of Impulsivity (BIS-10;

Barratt, 1993), which might help clarify the nature of the different forms of impulsivity present in TBI subjects and would facilitate our search for more interface areas with BPD impulsivity. A second limitation relates to the absence of inter-rater agreement for the DIB-R; the validity of the BPD diagnosis would improve with such a procedure. A measure of the subject's anosognosia would also add to the validity of the BPD diagnosis as measured with a semi-structured interview instrument like the DIB-R. Lastly, a comparison with a matched group of non TBI BPD subjects would be fruitful. One obstacle to such a design would come from the well-known presence of co-occurring disorders, typical of the heterogeneity of BPD (Grilo, MacGlasham & Skidol, 2000). Nevertheless, such a contrast would seem indicated at this point to ascertain that differences between TBI subjects and "true" borderlines actually result from borderline pathology and its associated psychosocial trauma, perhaps interacting with neuropsychological deficits. Research with a larger sample is needed to investigate the etiology and psychopathological features of BPD subjects after a TBI.

References

Agniel, A., Joanette, Y., Doyen, B., Duchein, C., & collaborateurs. (1992). Protocole Montréal-Toulouse d'Évaluation des Gnosies Visuelles – PEGV. Isbergues: L'Ortho-Édition.

American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Washington, DC: American Psychiatric Association.

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision. Washington, DC: American Psychiatric Association.

Armelius, B.A., Kullgren, G., & Renberg, E. (1985). Borderline diagnosis from hospital records: reliability and validity of Gunderson's Diagnostic Interview for Borderlines (DIB). The Journal of Nervous and Mental Disease, 173, 32-34.

Barratt, E.S. (1993). Impulsivity: integrating cognitive, behavioral and environmental data, In W.G McCown, J.L. Johhson & M.B. Shure (Eds). The impulsive client: theory, research and treatment (pp. 39-56). Washington: American Psychiatric Association.

Beck, A. (1987). Beck Depression Inventory: manual. San Antonio, Texas: Psychological Corporation.

Bjorklund, D.F. & Harnishfeger, K.K. (1990). The resources construct in cognitive development: diverse sources of evidence and a theory of inefficient inhibition. Developmental Review, 10, 48-71.

Bond, M. (1984). The psychiatry of closed head injury, In N. Brooks (Ed), Closed head injury: psychological, social, and family consequences (pp. 148-178). Oxford: Oxford University Press.

Bouvard, M. (2002). Questionnaires et échelles d'évaluation de la personnalité. Paris: Masson.

Brooks, N. (1984). Cognitive deficits after head injury, In N. Brooks (Ed), Closed head injury: psychological, social, and family consequences (pp. 44-73). Oxford: Oxford University Press.

Brooks, N. & McKinlay, W. (1983). Personality and behavioral change after severe blunt head injury – a relative's view. Journal of Neurology, Neurosurgery, and Psychiatry, 46, 336-344.

Cardebat, D., Doyon, B., Puel, M., Goulet, P., & Joanette, Y. (1990). Évocation lexicale formelle et sémantique chez des sujets normaux: performances et dynamiques de production en fonction du sexe, de l'âge et du niveau d'étude. Acta Neurologica Belgium, 90, 207-217.

Coles, E.M. (1997). Impulsivity in major mental disorders, In C.D. Webster & M.A. Jackson (Eds), Impulsivity: theory, assessment, and treatment (pp. 180-194). New York: Guilford Press.

Collette, F., van der Linden, M., Delrue, G., & Salmon, E. (2002). Frontal hypometabolism does not explain inhibitory dysfunction in Alzheimer disease. Alzheimer Disease & Associated Disorders, 16, 228-238.

Dougherty, D.M., Bjork, J.M., Huckabee, H.C.G., Moeller, F.G., & Swann A.C. (1999). Laboratory measures of aggression and impulsivity in women with borderline personality disorder. Psychiatry Research, 85, 315-326.

Dymetryszyn, H., Bouchard, M.A., Bienvenu, J.P., de Carufel, F., & Gaston, L. (1997). Overall maturity of object relations as assessed by the McGill Object Relations Scale. Bulletin of the Menninger Clinic, 61, 44-72.

Eslinger, P.J. & Damasio, A.R. (1985). Severe disturbance of higher cognition after bilateral frontal lobe ablation: patient EVR. Neurology, 35, 1731-1741.

First, M.B., Gibbon, M., Spitzer, R.L., Williams, J.B.W., & Benjamin, L.S. (1997). The Structured Clinical Interview for DSM-IV Axis II Personality Disorders. Washington: American Psychiatric Press.

Gagnon, J., Bouchard, M.A., Rainville, C. (2004). Differential diagnosis between borderline personality disorder and organic personality disorder. Manuscript in preparation.

Gainotti, G. (1993). Emotional and psychosocial problems after brain injury. Neuropsychological Rehabilitation, 3, 259-277.

Grilo, C.M., MacGlasham, T.H., & Skidol, A.E. (2000). Stability and course of personality disorders: the need to consider comorbidities and continuities between axis I psychiatric disorders and axis II personality disorders. Psychiatric Quartely, 71, 291-307.

Gunderson, J.G., Kolb, J.E., & Austin, V. (1981). The Diagnostic Interview for Borderline Patients. American Journal of Psychiatry, 138, 896-903.

Guttman, H.G. & Laporte, L. (1993). Entrevue diagnostique pour les troubles limites de la personnalité : traduction du « Revised Diagnostic Interview for Borderline Patients ». Montréal.

Hibbard, M.R., Bogdany, J., Uysal, S., Kepler, K., Silver, J.M., Gordon, W.A., & Haddad, L. (2000). Axis II psychopathology in individuals with traumatic brain injury. Brain Injury, 14, 45-61.

Hibbard, M.R., Uysal, S., Kepler, K., Bogdany, J., & Silver, J. (1998). Axis I psychopathology in individuals with traumatic brain injury. Journal of Head Trauma Rehabilitation, 13, 24-39.

Hibbard, S., Hilsenroth, M.J., Hibbard, J.K., & Nash, M.R. (1995). A validity study of two projective object representations measures. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 7, 432-439.

Hochhausen, N.M., Lorenz, A.R., & Newman, J.P. (2002). Specifying the impulsivity of female inmates with borderline personality disorder. Journal of Abnormal Psychology, 111, 495-501.

Jackson, S.R., Jackson, G.M., & Roberts, M. (1999). The selection and suppression of action: ERP correlates of executive control in humans. Neuroreport, 10, 861-865.

Jarvie, H.F. (1954). Frontal lobe wounds causing disinhibition. Journal of Neurology, Neurosurgery and Psychiatry, 17, 14-32.

Judd, T. & Fordyce, D. (1996). Personality tests, In R.J. Sbordone & C.J. Long (Eds), Ecological validity of neuropsychological testing (pp. 315-355). Florida: St-Lucie Press.

Kaplan, E.F., Goodglass, H., & Weintraub, S. (1983). The Boston Naming Test (2nd ed). Philadelphia: Lea & Febiger.

Kernberg, O. (1967). Borderline personality organization. Journal of the American Psychoanalytic Association, 15, 641-685.

Kernberg, O. (1975). Borderline conditions and pathological narcissism. New York: Aronson.

Kernberg, O.T. (1984). Object-relations theory and clinical psychoanalysis. New Jersey: Jason Aronson.

Kiehl, K.A., Smith, A.M., Hare, R.D., & Liddle, P.F. (2000). An event-related potential investigation of response inhibition in schizophrenia and psychopathy. Biological Psychiatry, 48, 210-221.

Kok, A. (1999). Varieties of inhibition: manifestations in cognition, event-related potentials and aging. Acta Psychologica, 101, 129-158.

Koponen, S., Taiminen, T., Portin, R., Himanen, L., Isoniemi, H., Heinonen, H., Hinkka, S, Tenovuo, O. (2002). Axis I and II psychiatric disorders after traumatic brain injury: a 30 years follow-up study. American Journal of Psychiatry, 159, 1315-1321.

Kozol, H.L. (1945). Pretraumatic personality and psychiatric sequelae of head injury. Archives of Neurology and Psychiatry, 53, 358-364.

Kreutzer, J.S., Witol, A.D., & Marwitz, J.H. (1996). Alcohol and drug use among young persons with traumatic brain injury. Journal of Learning Disabilities, 29, 643-651.

Kurtz, J.E., Putnam, S.H., & Stone, C. (1998). Stability of normal personality traits after traumatic brain injury. Journal of Head Trauma Rehabilitation, 13, 1-14.

Langenecker, S.A. & Nielson, K.A. (2003). Frontal recruitment during response inhibition in older adults replicated with fMRI. Neuroimage, 20, 1384-1392.

Lapierre, D., Braun, C.M.J., & Hodgins, S. (1995). Ventral frontal deficits in psychopathy: neuropsychological test findings. Neuropsychologia, 33, 139-151.

Leimkuhler, M.E. & Mesulam, M.M. (1985). Reversible go-no go deficits in a case of frontal lobe tumor. Annals of Neurology, 18, 617-619.

Leigh, J., Westen, D., Barends, A., Mendel, M.J., & Byers, S. (1992). The assessment of Complexity of Representations of People using TAT and interview data. Journal of Personality, 60, 809-837.

Lemelin, S. & Villeneuve, E. (2003). L'impulsivité associée au trouble de personnalité limite. Revue Québecoise de Psychologie, 24, 195-210.

Levin, H.S., Grossman, R.G., Rose, J.E., & Teasdale, G. (1979). Long term neuropsychological outcome of closed head injury. Journal of Neurosurgery, 50, 412-422.

Levin, H.S., High, W.M., Goethe, K.E., Sisson, R.A., Overall, J.E., Rhoades, H.M., Eisenberg, H.M., Kalisky, Z., & Gary, H.E. (1987). The neurobehavioral rating scale: assessment of the behavioral sequelae of head injury by the clinician. Journal of Neurology, Neurosurgery and Psychiatry, 50, 183-193.

Levin, H. & Kraus, M.F. (1994). The frontal lobes and traumatic brain injury. Journal of Neuropsychiatry and Clinical Neurosciences, 6, 443-454.

Levine, M.J., Van Horn, K.R., & Curtis, A.B. (1993). Developmental models of social cognition in assessing psychosocial adjustments in head injury. Brain Injury, 7, 153-167.

Lezak, M.D. (1987). Relationships between personality disorders, social disturbances, and physical disability following traumatic brain injury. Journal of Head Trauma Rehabilitation, 2, 57-69.

Lewis, L. & Rosenberg, S.J. (1990). Psychoanalytic psychotherapy with brain-injured adult psychiatric patients. The Journal of Nervous and Mental Disease, 178, 69-77.

Lishman, W.A. (1978). Psychiatric sequelae of head injuries: problems in diagnosis. Journal of the Irish Medical Association, 71, 306-314.

Masterson, J.F. (1976). Psychotherapy of the borderline adult: a developmental approach. New York: Brunner & Mazel.

Masterson, J.F. (1985). The real self: a developmental, self, and object relations approach. New York: Brunner & Mazel.

Murray, H.A. (1943). Thematic Apperception Test manual. Boston: Harvard College.

Nigg, J.T. (2000). On inhibition/disinhibition in developmental psychopathology: views from cognitive and personality psychology and a working inhibition taxonomy. Psychological Bulletin, 126, 220-246.

Oddy, M., Coughlan, T., Tyerman, A., Jenkins, D. (1985). Social adjustment after closed head injury: a further follow-up seven years after injury. Journal of Neurology, Neurosurgery and Psychiatry, 48, 564-568.

Parker, J.D. & Bagby, R.M. (1997). Impulsivity in adults: a critical review of measurement approaches, In C.D. Webster & M.A. Jackson (Eds), Impulsivity: theory, assessment, and treatment (pp. 142-157). New York: Guilford Press.

Porcerelli, J.H., Cogan, R., & Hibbard, S. (1998). Cognitive and affective representations of people and MCMI-II personality psychopathology. Journal of Personality Assessment, 70, 535-540.

Prigatano, G.P. (1986). Personality and psychosocial consequences of brain injury, In G.P. Prigatano, D.J. Fordyce, H.K. Zeiner, J.R. Rouech, M. Pepping, & B.C. Wood (Eds), Neuropsychological rehabilitation after brain injury (pp. 29-50). Baltimore: John Hopkins University Press.

Prigatano, G.P. (1987). Psychiatric aspects of head injury: problem areas and suggested guidelines for research, In H.S. Levin, J. Grafman, & H.M. Eisenberg (Eds), Neurobehavioral recovery from head injury (pp. 215-231). New York, Oxford: Oxford University Press.

Rosenthal, M., Christensen, B.K., & Ross, P.R. (1998). Depression following traumatic brain injury. Archives of Physical Medicine Rehabilitation, 79, 90-103.

Ruff, R.M., Camenzuli, L., & Mueller, J. (1996). Miserable minority: emotional risk factors that influence the outcome of a mild traumatic brain injury. Brain Injury, 10, 551-565.

Sarno, M.T. (1980). The nature of verbal impairment after closed head injury. Journal of Nervous and Mental Disease, 168, 685-692.

Seel, R.T., Kreutzer, J.S., Rosenthal, M., Hammond, F.M., Corrigan, J.D., & Black, K. (2003). Depression after traumatic brain injury: a National Institute on Disability and Rehabilitation Research model systems multicenter investigation. Archives of Physical Medicine Rehabilitation, 84, 177-184.

Sliwinski, M., Gordon, W.A., & Bogdany, J. (1998). The Beck Depression Inventory: is it a suitable measure of depression for individuals with traumatic brain injury? Journal of Head Trauma Rehabilitation, 13, 40-46.

Smith, T.E. (1993). Measurement of object relations: a review. Journal of Psychotherapy Practice and Research, 12, 19-37.

Stangl, D., Pfohle, B., & Zimmerman, M. (1985). A structured interview for the DSM-III personality disorders: a preliminary report. Archives of General Psychiatry, 42, 491-496.

Starkstein, S.E. & Robinson, R.G. (1997). Mechanism of disinhibition after brain lesions. The Journal of Nervous and Mental Disease, 185, 108-114.

Stone, M.H. (1990). The fate of borderline patients: successful outcome and psychiatric practice. New York: Guilford Press.

Tate, R.L. (1998). "It is not only the kind of injury that matters, but the kind of head": the contribution of premorbid psychosocial factors to rehabilitation outcomes after severe traumatic brain injury. Neuropsychological Rehabilitation, 8, 1-18.

Thomsen, I.V. (1984). Late outcome of very severe blunt head trauma: a 10-15 year second follow-up. Journal of Neurology, Neurosurgery and Psychiatry, 47, 260-268.

Van der Meere, J. & Stemerdink, N. (1999). The development of state regulation in normal children: an indirect comparison with children with ADHD. Developmental neuropsychology, 16, 213-225.

Van Horn, K.R., Levine, M.J., & Curtis, C.L. (1992). Developmental levels of social cognition in head-injured patients. Brain Injury, 6, 15-28.

Van Reekum, R., Bolago, I., Finlayson, M.A.J., Garner, S., & Links, P.S. (1996a). Psychiatric disorders after traumatic brain injury. Brain Injury, 10, 319-327.

Van Reekum, R., Conway, C., Gansler, D., White, R., & Bachman, D.L. (1993). Neurobehavioral study of borderline personality disorder. Journal of Psychiatry and Neuroscience, 18, 121-129.

Van Reekum, R., Links, P.S., & Fedorov, C. (1994). Impulsivity in borderline personality disorder, In K.R. Silk (Ed), Biological and neurobehavioral studies of borderline personality disorder (pp. 1-22). Washington: American Psychiatric Press.

Van Reekum, R., Links, P.S., Finlayson, M.A., Boyle, M., Bolago, I., Ostrander, L.A., & Moustacalis, E. (1996b). Repeat neurobehavioral study of borderline personality disorder. Journal of Psychiatry and Neuroscience, 21, 13-20.

Wechsler, D. (1987). Wechsler Memory Scale – Revised. San Antonio: Psychological Corporation.

Wechsler, D. (1997). Wechsler Adult Intelligence Scale – third edition. New York: Psychological Corporation.

Westen, D. (1985). Social Cognition and Object Relations Scale (SCORS): manual for coding TAT data. Unpublished manuscript. University of Michigan.

Westen, D. (1990). Towards a revised theory of borderline object relations: contributions of empirical research. International Journal of Psycho-Analysis, 71, 661-693.

Westen, D. (1991a). Cognitive-behavioral interventions in the psychoanalytic psychotherapy of borderline personality disorders. Clinical Psychology Review, 11, 211-230.

Westen, D. (1991b). Clinical assessment of object relations using the TAT. Journal of Personality Assessment, 56, 56-74.

Westen, D. & Cohen, R.P. (1993). The self in borderline personality disorder: a psychodynamic perspective, In Z.V. Segal & S.J. Blatt (Eds), The self in emotional distress: cognitive and psychodynamic perspectives (pp. 334-360). New York: Guilford Press.

Westen, D., Lohr, N., Silk, K.R., Gold, L., & Kerber, K. (1990). Object relations and social cognition in borderlines, major depressives, and normals: a Thematic Apperception Test analysis. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2, 355-364.

Westen, D., Huebner, D., Lifton, N., Silverman, M, & Boekamp, J. (1991). Assessing complexity of representations of people and understanding of social causality: a comparison of natural science and clinical psychology graduate students. Journal of Social and Clinical Psychology, 10, 448-458.

Whyte, J., Fleming, M., Polansky, M., Cavallucci, C., Coslett, H.B. (1997). Phasic arousal in response to auditory warnings after traumatic brain injury. Neuropsychologia, 35, 313-324.

Whyte, J., Fleming, M., Polansky, M., Cavallucci, C., Coslett, H.B. (1998). The effects of visual distraction following traumatic brain injury. Journal of the International Neuropsychological Society, 4, 127-136.

Zanarini, M.C., Gunderson, J.G., Frankenburg, F.R., & Chauncey, D.L. (1989). The Revised Diagnostic Interview for Borderlines: discriminating BPD from other axis II disorders. Journal of Personality Disorders, 3, 10-18.

Zanarini, M.C., Gunderson, J.G., Frankenburg, F.R., & Chauncey, D.L. (1990). Discriminating borderline personality disorder from other axis II disorders. American Journal of Psychiatry, 147, 161-167.

Zaparniuk, J. & Taylor, S. (1997). Impulsivity in children and adolescents, In C.D. Webster & M.A. Jackson (Eds), Impulsivity: theory, assessment, and treatment (pp. 158-179). New York: Guilford Press.

Table 1

Sex, Age, Educational Level, Marital, Parental, Occupational and Driving Status for Both Groups of Subjects

	TBI Subjects	Controls
Sex		
Male	20 (66%)	20 (66%)
Female	10 (33%)	10 (33%)
Mean age	36.3 (13.1)	36.3 (13.3)
Mean years of education	14.07 (3.56)	14.9 (3.43)
Marital status		
Single	18 (60%)	11 (37%)
Married	8 (27%)	16 (53%)
Divorced	3 (10%)	3 (10%)
Widowed	1 (3%)	0
Parental status		
Children	8 (27%)	15 (50%)
Occupational status		
Unemployed	19 (63%)	3 (10%)
Employed	5 (17%)	27 (90%)
Student	3 (10%)	0
Volunteer	2 (7%)	0
Currently in rehabilitation	1 (3%)	0
Possesses driver's licence	18 (60%)	30 (100%)

Note. Standard deviation in parentheses

Table 2
TBI and Control Subjects Showing Clinical Features (Score of 2) in Summary Statements of the DIB-R

	TBI Subjects		Controls			
Summary Statements	N	%	N	%	X^2 (df = 1)	p
Affective features						
Chronic-major depression	15	50.0	1	3.3	14.40	0.000*
Helplessness-hopelessness-worthlessness-guilt	13	43.3	3	10.0	6.90	0.007*
Chronic anger-frequent angry acts	9	30.0	3	10.0	2.60	0.104t
Chronic anxiety	12	40.0	5	16.7	2.95	0.084t
Chronic loneliness-boredom-emptiness	15	50.0	3	10.0	9.60	0.002*
Cognitive features						
Odd thinking-unusual perception experiences	5	16.7	8	26.7	0.39	0.532
Nondelusional paranoia	9	30.0	6	20.0	0.356	0.552
Quasi-psychotic thought	0	0	2	6.7	0.52	n.a.
Impulsive features						
Substance abuse-dependence	2	6.7	5	16.7	0.65	n.a.
Sexual deviance	3	10.0	2	6.7	0.00	n.a.
Self-mutilation	0	0	0	0	n.a.	n.a.
Manipulative suicide efforts	7	23.3	1	3.3	3.61	n.a.
Other impulsive patterns	6	20.0	4	13.3	0.12	0.731
Interpersonal features						
Intolerance of aloneness	6	20.0	6	20.0	0.00	1.000
Abandonment-engulfment-annihilation concerns	7	23.3	3	10.0	1.08	0.299
Counterdependency-serious conflict over help/care	6	20.0	7	23.3	0.00	1.000
Stormy relationships	4	13.3	3	10.0	0.00	n.a.
Dependency-masochism	4	13.3	1	3.3	0.87	n.a.
Devaluation-manipulation-sadism	2	6.7	1	3.3	0.00	n.a.
Demandingness-entitlement	4	13.3	0	0	n.a.	n.a.
Treatment regressions	1	3.3	0	0	n.a.	n.a.
Countertransference problems	3	10.0	0	0	n.a.	n.a.

Note. n.a. = not applicable because some expected values are inferior to 5; * = statistical significance; t = trend of statistical significance

Table 3
Close Relatives Responses (Definite Presence, Score of 2) to the SCID-II Questionnaire for BPD

		TBIs		Controls			
Questions	Trait-DSM-IV	N	%	N	%	X^2 df=1	p
1. Has he often become frantic when he thought that someone he really cared about was going to leave him?	Fear of abandonment	14	46.7	8	26.7	1.79	0.180
2. Do his relationships with people he really cares about have lots of extreme ups and downs?	Unstable and intense relationships	13	43.3	4	13.3	5.25	0.020*
3. Has he all of a sudden changed his sense of who he is and where he is headed?	Identity disturbance-unstable self-image	14	46.7	3	10.0	8.21	0.003*
4. Does his sense of who he is often change dramatically?	Identity disturbance-unstable self-image	11	36.7	1	3.3	8.44	0.002*
5. Is he different with different people or in different situations so that he sometimes does not know who he really is?	Identity disturbance-unstable self-image	7	23.3	2	6.7	2.09	n.a.
6. Have there been lots of sudden changes in his goals, career plans, religious beliefs, and so on?	Identity disturbance-unstable self-image	11	36.7	4	13.3	3.20	0.072t
7. Has he often done things impulsively?	Impulsivity	9	30.0	0	0	8.37	n.a.
8. Has he tried to hurt or kill himself or threatened to do so?	Recurrent suicidal behavior-self mutilating behavior	4	13.3	0	0	2.41	n.a.
9. Has he ever cut, burned, or scratched himself on purpose?	Recurrent suicidal behavior-self mutilating behavior	0	0	0	0	n.a.	n.a.
10. Does he have a lot of sudden mood changes?	Affective instability	11	36.7	2	6.7	6.28	0.010*
11. Does he often feel empty inside?	Feelings of emptiness	13	43.3	0	0	14.14	0.000*
12. Does he often have temper outbursts or get so angry that he loses control?	Inappropriate, intense anger or difficulty controlling anger	8	26.7	1	3.3	4.71	n.a.
13. Does he hit people or throw things when he gets angry?	Inappropriate, intense anger or difficulty controlling anger	1	3.3	0	0	0.00	n.a.
14. Do even little things get him very angry?	Inappropriate, intense anger or difficulty controlling anger	10	33.3	2	6.7	5.10	0.011*
15. When he is under a lot of stress, does he get suspicious of other people or feel especially spaced out?	Transient, stress-related paranoid ideation or severe dissociative symptoms	12	40.0	2	6.7	7.55	0.002*

Note. X^2 (df = 1); n.a. = not applicable because some expected values are inferior to 5; * = statistical significance; t = trend of statistical significance

Table 4

Pearson Correlations of DIB-R (Total and Section Scores) with SCID-II, DIB-R Pre-TBI, Go-No Go Task, SCORS Complexity and Affect-Tone and BDI

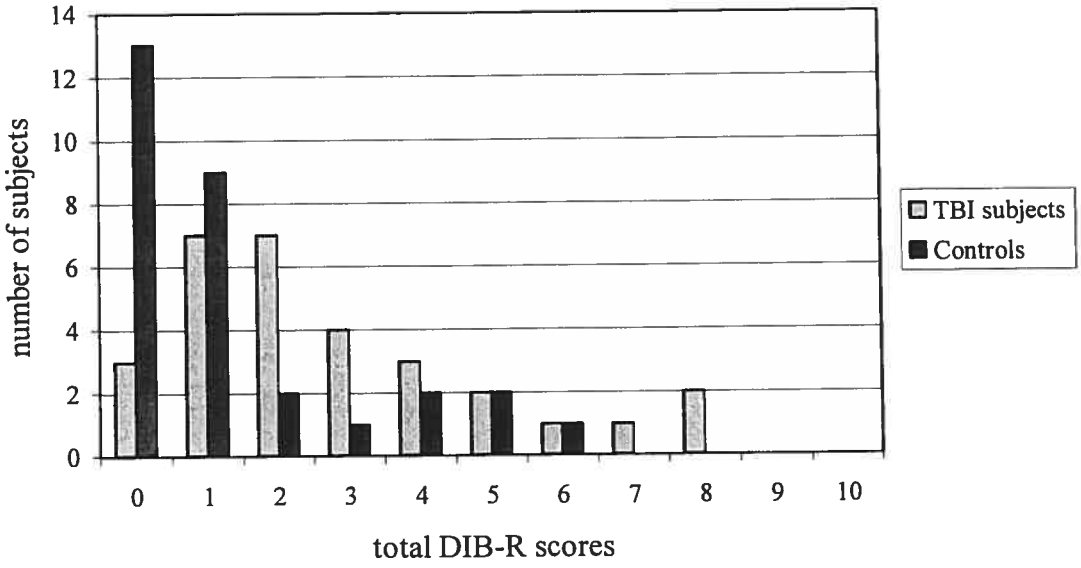
	TBI Subjects					Controls				
	DT	DA	DC	DI	DR	DT	DA	DC	DI	DR
SCID	.41*	.07	.28	.57***	.09	.56***	.22	.51**	.43*	.30
D-pre	.29	-.02	.20	.08	.40*	_	_	_	_	_
Gngo	.26	.20	.24	.08	.17	-.14	-.28	-.11	.03	-.12
ScorsC	.13	.17	.22	-.02	.02	-.19	-.33	-.02	-.08	-.19
ScorsA	-.34t	-.30	-.18	-.12	-.28	-.43*	-.25	-.36*	-.36*	-.17
BDI	.60***	.45**	.18	.39*	.47**	.54**	.07	.15	.73***	.43*

Note. BDI = Beck Depression Inventory. DA = DIB-R Affect section. DC = DIB-R Cognition section. DI = DIB-R Impulse action patterns section. D-pre = DIB-R pre-TBI total score. DR = DIB-R Relationships section. DT = DIB-R total score. Gngo = Go-no go task number of commission error. ScorsA = SCORS Affect-Tone Relationship Paradigms. ScorsC = SCORS Complexity of Representation of People. SCID = SICD-II total score.

* = $p < 0.05$ ** = $p < 0.01$ *** = $p < 0.001$ t = trend ($p < 0.06$)

Graph 1

Frequency Distribution for TBI and Control Groups for Each Total DIB-R Scores



Article 3

La psychothérapie psychanalytique suite à un traumatisme cranio-cérébral: présentation d'un cas clinique

La psychothérapie psychanalytique suite à un traumatisme cranio-cérébral: présentation d'un cas clinique[1]

Jean R. Gagnon

Institut de réadaptation de Montréal

[1] L'auteur aimerait remercier le Dr Marc-André Bouchard et les membres du comité de publications du CRIR pour leurs commentaires éclairants durant la rédaction de l'article.

La correspondance doit être adressée à Jean Gagnon, neuropsychologue et psychologue clinicien, Institut de réadaptation de Montréal, 6300 ave Darlington, Montréal (Québec), H3S 2J4.

La psychothérapie psychanalytique suite à un traumatisme cranio-cérébral: présentation d'un cas clinique

Résumé

Le but de cet article est d'illustrer, à partir d'un cas clinique, que la psychothérapie psychanalytique peut avoir une place importante en réadaptation auprès des personnes ayant subi un traumatisme cranio-cérébral et qu'elle peut apporter une compréhension et une intervention complémentaire à l'approche neuropsychologique, particulièrement pour les personnes qui présentent des réactions psychologiques complexes pouvant interférer avec le processus de réadaptation.

Mots clés: traumatisme cranio-cérébral, psychothérapie psychanalytique

Abstract

A clinical case is presented to illustrate how psychoanalytic psychotherapy can be helpful with traumatic brain injury patients in rehabilitation and how this approach is complementary to neuropsychological intervention in terms of conceptualization and treatment, particularly for individuals presenting complex psychological reactions which might interfere with the rehabilitation process.

Keys words: traumatic brain injury, psychoanalytic psychotherapy

La psychothérapie psychanalytique suite à un traumatisme cranio-cérébral: présentation d'un cas clinique

Introduction

À côté des séquelles objectives du traumatisme cranio-cérébral (TCC), c'est-à-dire de son effet direct et mesurable sur les fonctions sensori-motrices, cognitives et comportementales, il y a l'impact de ce traumatisme sur l'expérience subjective de la personne (Solms, 1995). Il s'agit d'une dimension intérieure qui ne peut se mesurer par les tests objectifs mais qui s'entend à travers la parole de la personne en psychothérapie et qui se vit à travers la relation entre le client et son psychothérapeute. Elle peut prendre des formes bien différentes et être le lieu d'une souffrance affective importante. Parfois, la personne est tellement envahie par son monde intérieur qu'elle n'arrive plus à profiter pleinement de son programme de réadaptation. Elle diminue ainsi ses chances de s'adapter à sa nouvelle condition neurologique.

Que faire avec cette dimension psychologique lorsqu'elle perturbe le processus de réadaptation? Faut-il l'ignorer, se dire qu'elle va évoluer toute seule sans notre aide, tenter d'en contrôler les impacts par des médicaments ou des stratégies cognitivo-comportementales? Une littérature clinique se développe depuis quelques années sur l'apport de la psychothérapie psychanalytique (PP) pour venir en aide aux personnes

TCC (ou avec lésions neurologiques acquises) présentant des problèmes psychologiques complexes (Kaplan-Solms & Solms, 1996, 2000; Lewis, 1986, 1991, 1992 ; Lewis et Rosenberg, 1990 ; Lewis, Athey, Eyman & Saeks, 1992; Oppenheim-Gluckman, 2000; Solms, 1995; Stern, 1985; Stern & Stern, 1990). Ce courant clinique s'intéresse à la PP en tant que cadre thérapeutique particulier permettant d'étudier cette dimension subjective et d'intervenir sur les éléments sous-jacents à la souffrance qu'elle contient.

On véhicule souvent une image plus ou moins stéréotypée de la PP qui n'apparaît pas compatible avec notre clientèle TCC. Est-ce qu'il s'agit d'une approche pertinente pour la personne TCC qui a des séquelles découlant directement des atteintes cérébrales et non de leur « Inconscient »? De plus, si tel comportement semble issu d'une dynamique psychologique, la personne TCC a t-elle le bagage cognitif et l'introspection nécessaire pour entreprendre un tel traitement. Étant donné les problèmes de jugement, de discernement et de mémoire de la personne, la PP sera t-elle plus source de confusion que de clarté pour l'aider à se comprendre et à cheminer sur le plan psychologique. De toute évidence, il y a des nuances à faire tant du côté de la PP que du côté de la clientèle TCC. Il n'y a pas qu'une seule façon de pratiquer la PP comme il n'y a pas qu'une seule entité TCC.

La pratique de la PP en réadaptation suite à un TCC demeure une approche innovatrice pour venir en aide à ces personnes. Cet article se veut une invitation à

dépasser l'image plus ou moins stéréotypée de la PP et une opportunité de la faire connaître dans le milieu de la réadaptation. L'objectif premier de cet article est d'illustrer, à partir d'un cas clinique, comment cette approche thérapeutique, en complémentarité avec l'intervention neuropsychologique, peut contribuer à la compréhension et à la prise en charge des réactions psychologiques complexes de certaines personnes TCC.

Définition de la psychothérapie psychanalytique

La PP s'inspire bien sûr de la psychanalyse. Elle fait appel au même vaste ensemble de *théories psychanalytiques* couvrant différents aspects des processus mentaux et de la personnalité comme la structure et le contenu de l'appareil psychique, la psychopathologie, le développement de la personnalité, le cadre analytique, etc. Ces théories sont en constante évolution depuis plus de 100 ans, soit depuis la naissance de la psychanalyse qu'on situe autour de 1895 avec les « Études sur l'hystérie » de Freud et Breuer proposant les premières conceptualisations systématiques de l'Inconscient, jusqu'aux théories plus contemporaines des relations d'objet apparues à partir des années 60/70 en passant par la psychologie du Moi des années 40/50. Aujourd'hui, on voit de plus en plus de recherches empiriques ainsi que des points de contact avec d'autres disciplines, notamment la psychologie cognitive et la neuropsychologie, permettant de mettre à l'épreuve et d'enrichir divers concepts psychanalytiques (Gagnon, Bouchard, Rainville, Lecours & St-Amand, 2004; Miller,

1991a; Schacter, 1986; Solms, 1995, 1996, 1997; Solms & Lechevalier, 2002; Solms & Turnbull, 2002; Westen, 1990).

Bien qu'alimentées par la recherche empirique, ces théories sont principalement issues des observations cliniques obtenues dans un cadre thérapeutique bien particulier. Il s'agit de la méthode analytique permettant d'obtenir des observations uniques sur les aspects dynamiques de la personnalité. À travers un *travail interactif* que l'on nomme « alliance de travail » impliquant tant le psychothérapeute que le client, il est possible d'accéder à certaines représentations (pensées, images, souvenirs, sentiments, etc.) contre lesquelles ce dernier se défendait de façon plus ou moins consciente. Cette méthode a aussi évolué, passant de l'hypnose à l'association libre où le client est invité à verbaliser ses pensées, ses sentiments, ses sensations et ses fantaisies, en essayant de ne rien omettre même si le contenu peut lui paraître désagréable, ridicule ou dénué d'intérêt. Aujourd'hui, on parle du cadre analytique, un espace de travail où se développe une relation thérapeutique pouvant être plus ou moins intense et dont les composantes et leurs effets sont largement étudiés dans la littérature psychanalytique. Nous n'avons qu'à penser au transfert et contre-transfert qui demeurent des agents thérapeutiques très importants, mais aussi à l'analyse des rêves et des résistances. Le rêve s'analyse à travers les associations libres du client. L'analyse des résistances renvoie au travail sur les aspects défensifs plus ou moins conscients qui bloquent la verbalisation de la personne en psychothérapie. Enfin, le transfert désigne le processus par lequel les enjeux psychologiques de la personne

s'actualisent dans sa relation avec le psychothérapeute. À l'inverse, le contre-transfert réfère aux réactions psychologiques et émotionnelles pouvant naître chez le psychothérapeutique envers son client durant la rencontre et qui pourront, en tant que message non verbal, l'aider à comprendre ce dernier. Il s'agit d'informations cliniques d'importance puisque les enjeux du client prennent place de façon authentique dans la relation et que ce dernier n'en est habituellement pas conscient et ne peut donc les verbaliser. L'analyse du transfert est donc une opportunité unique pour travailler les aspects concrets et actuels qui se jouent dans la relation et qui renvoie à la personnalité du client. L'application de cette méthode amène la personne à prendre progressivement conscience de l'influence des aspects dynamiques plus ou moins conscients sur son fonctionnement afin de les comprendre et de s'en dégager de façon graduelle. Il s'agit des *effets thérapeutiques* de la méthode.

La PP est une approche de *psychothérapie traditionnelle*. Elle se distingue néanmoins de la psychanalyse principalement par son cadre de travail moins intense (1-2 versus 4-5 rencontres par semaine) et plus souple pouvant s'adapter à différentes clientèles. La PP comprend souvent un pôle analytique et un pôle de soutien psychologique. Le premier pôle s'inspire de la psychanalyse (telle que décrite précédemment) et vise une compréhension plus en profondeur des enjeux psychologiques de la personne, alors que le second pôle veille à instaurer un cadre de travail respectant les limitations particulières de cette dernière et mise aussi sur ses capacités d'adaptation à ses difficultés. Le cadre thérapeutique proposé par Lewis (1991) pour adapter la PP à la

clientèle TCC sera discuté après la présentation du cas clinique (voir section « La psychothérapie psychanalytique de Mme R. »). La PP se distingue aussi de la *psychothérapie classique* auprès des personnes TCC par son volet analytique. En effet, la psychothérapie auprès des personnes TCC habituellement décrite dans la littérature mise davantage sur le soutien psychologique et les interventions éducatives et de réadaptation (Bennett, 1987; Carberry & Burd, 1986; Cicerone, 1989; Miller, 1991b; Prigatano & Klonoff, 1988). Cette dernière forme de psychothérapie peut s'adresser aux difficultés d'acceptation des déficits et aux problèmes psychosociaux qui en découlent. Elle s'adresse aussi aux problèmes d'estime de soi dans une atmosphère attentive et compréhensive. Elle est de nature plutôt brève, directive, axée sur la réalité et sur les préoccupations immédiates. La PP sera généralement plus intense, plus longue, moins directive, axée sur la dimension subjective et son contenu plus ou moins conscients. Elle s'adresse davantage aux réactions psychologiques plus complexes qui appellent un traitement sur une problématique psychologique particulière. Le lecteur intéressé à connaître davantage la PP et la diversité de ses champs d'application clinique est référé à l'excellent ouvrage collectif issu des cliniciens du Pavillon Albert-Prévost à Montréal (Doucet & Reid, 1996).

Réactions émotionnelles chez la personne TCC : point de vue analytique

Suite aux grands bouleversements qui peuvent découler d'un TCC, certains individus arrivent à reprendre un équilibre avec un support psychologique alors que d'autres n'y arrivent pas même après plusieurs années. Qu'en est-il de cette personne qui n'arrive

pas à faire le deuil de ses pertes, dont les réactions sont complexes et intenses, de la personne qui demande une attention thérapeutique plus grande, de celle qui n'évolue pas comme prévu ou parfois même régresse, etc. Comment comprendre ces réactions émotionnelles? C'est ici que les modèles psychanalytiques peuvent être complémentaires aux modèles neuropsychologiques dans la compréhension et l'intervention vis-à-vis des réactions psychologiques et aussi de la prise en compte de l'influence de la personnalité pré morbide sur ces réactions. En bref, en plus des concepts neuropsychologiques permettant de mieux comprendre les atteintes cognitives de la personne, on doit prendre en considération le reste de la « psyché » de l'individu si l'on veut comprendre les comportements et l'expérience subjective de notre client. À titre d'exemple, on doit évaluer la signification des pertes et la capacité de la personne à faire un deuil.

Dans une perspective analytique, on peut dire que l'expérience de la personne TCC tient à la fois du traumatisme et du travail du deuil. Lorsque l'on transporte sur le plan psychique la notion de *traumatisme*, on comprend que l'événement fait brusquement effraction dans l'organisation psychique du sujet. Dans ces cas, les symptômes viennent du fait que l'afflux d'excitation qui fait irruption et menace l'intégrité de la personne restera dans sa psyché car cette dernière n'a pu y répondre soit par une décharge, soit par une élaboration psychique. Les états de stress post-traumatiques sont maintenant reconnus chez les personnes TCC (Ohry, Rattok & Solomon, 1996). La psychanalyse reconnaît donc l'existence d'un état dont le déterminant serait

l'événement traumatique comme tel. Cependant, elle prend en compte non pas seulement la notion de trauma mais aussi la notion de prédisposition du sujet à ce traumatisme. Ainsi, le concept de trauma demeure relatif à l'histoire et à l'organisation du sujet qui a vécu l'événement. De la même manière, la perte (physique, cognitive ou comportementale) sera porteur d'une signification particulière en fonction de la personne TCC. Selon que la perte (ou l'événement) entre ou pas en résonance avec un point faible de l'organisation de la personnalité du sujet, elle pourra précipiter ou réactiver un conflit que la personne n'avait pas réussi à résoudre antérieurement.

Quant au *travail du deuil* tel que défini en psychanalyse, il s'agit du processus psychologique qui permet à l'individu d'atténuer la douleur qu'il ressent suite à la perte d'une personne significative ou d'une fonction importante de sa personnalité. Ce processus est loin d'être passif car il implique un travail pour la psyché de l'individu ayant pour but de détacher les liens affectifs que celui-ci entretenait avec la personne significative ou avec la partie perdue de soi. Ces liens peuvent être complexes et comprendre à la fois des émotions positives et négatives. Quant au travail comme tel, il consiste en la remémoration des souvenirs de la personne ou de la partie de soi, la verbalisation des espoirs de la retrouver et le tissage des liens avec la nouvelle réalité. Ce faisant, le sujet pleure sa perte et se console jusqu'à ce que les liens affectifs s'atténuent, voire disparaissent. Ce travail est nommé *élaboration*

psychique. Comme on le sait, ce travail peut être très difficile à accomplir et cela pour différentes raisons cliniques.

La présentation du cas clinique permettra d'illustrer comment la PP peut être une approche pertinente pour aider la personne TCC à résoudre d'abord une partie de ses conflits pour lui permettre ensuite de vivre son deuil. Nous verrons dans ce cas clinique que le TCC a soulevé des conflits non résolus autour de la sexualité de la personne et que leur résolution était incontournable pour l'acceptation des pertes et la reprise d'un équilibre psychologique. Étant donné l'importance que revêt l'histoire personnelle et l'organisation de la personnalité du sujet dans cette approche, la présentation du cas sera davantage détaillée.

Présentation d'un cas clinique[2]

Mme R., âgée de 35 ans, mariée, mère de deux enfants âgés de 8 et 10 ans, sans emploi, a développé un trouble anxieux et une dépression majeure suite à un polytraumatisme avec TCC léger-à-modéré survenu lors d'un accident de voiture par collision frontale. Le dossier médical indiquait un score de 13/15 à l'Échelle de coma de Glasgow, une perte de conscience probable, une amnésie de l'événement, une amnésie rétrograde de quelques jours, une amnésie post-traumatique d'environ 10 jours et une période de désorientation. Le CT-scan cérébral était négatif. Madame a subi de nombreuses blessures (lacération temporale gauche, fracture de la clavicule, fracture de l'index gauche, lacération de la jambe et du poignet gauche) et les

évaluations multidisciplinaires mettaient en évidence un traumatisme à l'œil gauche, une hémianopsie homonyme gauche, des acouphènes, des troubles vestibulaires, une hypersensibilité au bruit et des difficultés cognitives au niveau de l'attention, de la concentration, de la mémoire, des fonctions visuo-perceptuelles et exécutives. Mme R. a été hospitalisée pour une période d'environ quatre semaines dans un centre de réadaptation afin de suivre un programme de réadaptation fonctionnelle intensive pour ensuite poursuivre ses traitements sur une base externe durant une année. Durant cette période, elle a été suivie en PP pour ses réactions anxio-dépressives. Sa médication consistait en du Paxil 20 mg. Peu avant le transfert de dossier vers un nouveau centre de réadaptation (procédure habituelle pour entamer la réadaptation axée sur l'intégration sociale), la résistance de la cliente à changer de psychologue a culminé jusqu'à la crise suicidaire. Devant la fragilité de madame, il a été décidé qu'elle poursuivrait ses traitements avec son premier psychologue. Au total, la PP aura durée presque 5 ans à raison d'une rencontre par semaine pour débuter pour s'étendre à deux rencontres par la suite. La cliente a présenté de nouveau de sérieuses difficultés autour des enjeux liés à la fin du traitement.

Mme R. a complété une formation universitaire (éducation physique et biologie) qui lui ont permis d'occuper de nombreux postes à titre de haut fonctionnaire dans le gouvernement de son pays d'origine. Depuis son arrivée au Canada, soit quelques années avant son accident de voiture, elle n'avait pas occupé d'emploi. Selon son conjoint, elle s'épanouissait davantage à domicile, dans le cadre familial, avec

[2] Les données nominatives ont été changées afin d'assurer la confidentialité de la personne

notamment l'éducation des enfants. Mme R. était décrite comme une personne forte et inébranlable devant les problèmes. Elle aimait venir en aide aux personnes démunies. Elle était également très active dans l'organisation des activités sociales de sa communauté. Son côté dynamique, efficace et organisé, de même que son attitude positive faisait d'elle une personne très appréciée par son entourage. Il faut aussi préciser que son allure vivante et colorée se conjuguait avec un langage, une tenue et des manières toujours très soignés et convenables.

Un trait ressortait fortement de son *caractère* et constituait une formation défensive manifeste: elle tenait à tout faire par elle-même et à être complètement indépendante. Par exemple, elle s'objectait à tirer quelque privilège que ce soit de son statut social et tenait à faire tous ses travaux domestiques (ex.: ménage, jardinage). Aussi, pour assurer ses déplacements, elle préférait marcher sur de très longues distances plutôt que de prendre la voiture. Elle semblait posséder la pleine maîtrise de sa vie et de son corps. Par ailleurs, Mme R. était une jolie femme au corps athlétique et elle attirait, à sa grande surprise, l'attention et l'admiration des hommes depuis sa puberté. À ses yeux, son corps n'avait rien de particulier et elle n'y prêtait pas la moindre attention. Aussi, elle n'aimait pas parader devant les autres durant les grandes soirées diplomatiques où elle occupait une place d'honneur.

De son histoire personnelle, Mme R. a eu une enfance heureuse, née d'une mère forte, une « leader très sévère mais juste ». Elle se souvient qu'elle obéissait toujours

à sa mère même si cela ne lui faisait pas toujours plaisir. Par exemple, pour ne pas déroger aux attentes de celle-ci, elle revenait de l'école sans traîner, sans s'amuser. Elle souffrait de ne pas avoir beaucoup de liberté. La cliente explique l'attitude très protectrice (ou interdictrice) de sa mère en répondant qu'à cette époque, tout ce qu'une fille faisait était considéré comme le fruit de l'éducation maternelle. Elle se souvient aussi des occasions où la maison était vide à son arrivée, car sa mère devait souvent accompagner un de ses frères à l'hôpital étant donné la santé fragile de quelques uns d'entre eux. Cela la frustrait d'arriver dans une maison froide et sans vie. Elle attendait alors à l'extérieur car elle avait peur d'être seule dans la maison. Elle avait aussi peur des petits animaux qui apparaissent par surprise. Plus âgée, sa seule peur sera d'être dans une pièce avec un homme et que ce dernier ferme la porte. De son père, décrit comme travaillant, elle ne mentionne que très peu de choses à son propos, si ce n'est que ce dernier était inquiet de voir sa fille tarder à se marier durant ses longues études, risquant ainsi de devenir fille mère et de déshonorer sa famille.

Durant ses années universitaires, la *découverte de sa sexualité* a été très anxiogène et ne s'est faite que tardivement, presque à son insu. Dans son esprit, il n'y avait pas de différence entre les hommes et les femmes. Elle trouvait les hommes ridicules et déplacés de lui faire des avances, et cela avait à coup sûr l'effet d'une « douche froide » sur leur relation. Les avances étaient accueillies avec surprise et vécues comme une véritable menace à son indépendance. Elle ne voulait pas développer des sentiments à son tour et que ceux-ci la détournent de toutes ses ambitions

professionnelles. Dans sa culture d'origine et par conséquent dans son esprit, les hommes étaient des séducteurs, des manipulateurs. Devant leur force, les filles étaient des victimes faciles ne demandant qu'à éprouver du plaisir et demeuraient inconscientes du risque de devenir enceinte. Son corps et sa sexualité étaient donc sacrés et tabous tout à la fois, et cette dualité prenait des formes contradictoires. Ainsi, tout en étant très attachée à ses vêtements ainsi qu'à son image, elle refusait de prendre le rôle de princesse au théâtre de son école, risquant ainsi de faire l'envie des autres filles. Pour la même raison, elle ralentissait le pas durant une compétition de course à pied pour ne pas gagner avec une trop grande longueur d'avance. Dans les vestiaires, elle était choquée de voir les autres femmes se dévêtir devant elle. Se centrer sur son corps et son apparence physique, c'était se mettre en position de vulnérabilité devant la tentation. Elle se devait donc d'être vigilante et d'exercer un grand contrôle sur son corps. Dans ses relations avec les hommes, elle semblait complètement aveugle au jeu du désir et de l'interdit qu'elle manifestait. Ayant appris à faire plaisir aux autres, dit-elle, cela lui jouait des tours car les hommes croyaient qu'elle désirait plus. Par exemple, elle avait accepté l'invitation d'un professeur de l'accompagner durant une longue expédition dans la forêt et ce dernier avait tenté de l'embrasser au retour, ce qu'elle refusa avec force et indignation.

Son premier baiser est venu d'un ami qu'elle fréquentait de façon fraternelle depuis plusieurs années. Cela s'est passé dans sa chambre. Elle en fut très perturbée, éprouvant à la fois du plaisir et de la peur. En outre, elle a senti la perte du contrôle

sur son corps, « ce trésor qu'on ne donne pas ». Alors, elle s'est punie en refusant de sortir de sa chambre et en s'obligeant à de longues heures d'étude. Plus tard, elle développera des sentiments amoureux envers cet homme et acceptera de le fiancer. Cependant, durant un long séjour de son fiancé à l'étranger, elle développera une relation avec un autre homme qui deviendra son futur mari. Malgré ses sentiments encore présents pour son fiancé, elle ne pouvait, dit-elle, se permettre de refuser cette nouvelle proposition car son nouvel ami avait toutes les qualités qu'une femme peut désirer : calme, gentil, intelligent, sécurisant. Elle se souvient aussi de sa grande surprise le jour où son futur mari, qu'elle considérait alors comme un simple ami, lui rapporta de voyage une alliance. Elle ne s'était pas rendue compte de l'évolution de leur relation et cela, même après lui avoir demandé une bague (de la taille de son annulaire) en souvenir de voyage. Quelques semaines avant leur mariage, la cliente connue sa première relation sexuelle suite à un *accident de voiture*. Cet accident l'avait suffisamment ébranlée pour lui permettre de se rebeller contre ses propres tabous. Après les ébats amoureux, elle s'était évanouie. Le lendemain, elle s'était sentie honteuse mais aussi libérée. Suite à son mariage, Mme R. a pu vivre une sexualité épanouie, « permise », et poursuivre sa carrière dans le but ultime de rendre service et d'aider autrui.

Suite à son TCC, Mme R. a présenté plusieurs séquelles physiques et cognitives. Sur le plan physique, la fatigabilité était particulièrement invalidante. À la maison, elle était somnolente presque en permanence et restait au lit pratiquement toute la journée.

Aussi, pouvait-elle soudainement, à la maison comme en traitement, avoir des chutes d'énergie où elle tombait dans un état de quasi-sommeil durant plusieurs minutes sans que ses signes vitaux soient anormaux. Ces attaques de sommeil survenaient lentement (et non subitement comme c'est le cas dans la narcolepsie) lorsqu'elle était confrontée à une limitation ou à un sujet trop émotif. Aussi, de graves nausées, des problèmes de vertige, des maux de tête et des problèmes à la marche survenaient la plupart du temps à son réveil, si bien qu'elle avait besoin d'une aide physique pour ses déplacements alors qu'elle marchait normalement à son arrivée. Généralement, à son réveil, elle avait oublié ce qui l'avait troublé.

Parmi les *symptômes psychologiques*, il y avait en tout premier lieu la grande détresse que suscitait chez Mme R. l'idée que sa mort dans cet accident aurait pu laisser ses enfants démunis sans leur mère. Cette idée suscitait énormément de révolte et une grande vulnérabilité chez elle. Elle se sentait alors très coupable d'être à l'hôpital et non à la maison pour prendre soin d'eux. Cette détresse psychologique était suffisante pour empêcher la pleine participation aux traitements de réadaptation et recommander le congé d'hospitalisation.

Mme R. avait aussi développé une *peur des accidents de voiture*. Elle craignait, ou bien d'être frappée à nouveau, ou bien que son mari et ses enfants soient victimes d'un accident eux aussi. Cette idée lui causait un stress continuel. Elle accompagnait son mari lorsqu'il se déplaçait en voiture et lui téléphonait plusieurs fois par jour pour

s'assurer qu'il était bien sain et sauf. Quant à ses enfants, elle empêchait le plus jeune d'aller jouer dans la ruelle et demandait à son plus vieux de lui téléphoner dès son arrivée à l'école. Cette « compulsion » à vérifier et à contrôler constamment les déplacements de ses enfants pouvait causer des conflits avec eux dans lesquels elle devenait malheureuse et se sentait « mauvaise mère ». Mme R. avait aussi développé une *agoraphobie avec trouble panique*. Dans les espaces ouverts, elle avait la sensation d'être étouffée et aspirée; elle avait peur d'être abandonnée à son sort et elle devait s'agripper au bras de la personne qui l'accompagnait.

En parallèle à ses peurs, Mme R. souffrait d'une *dépression majeure*. Elle se sentait révoltée et injustement dépossédée de ses capacités physiques, intellectuelles et morales. Ses incapacités, selon elle, la rendaient ridicule aux yeux des autres. Elle refusait de fréquenter son cercle d'amis et de s'impliquer (selon ses capacités) de peur qu'on la compare à la façon dont elle était avant son accident : efficace, rapide, active, vive, organisée. « Plutôt que d'avoir une image diminuée, vaut mieux ne pas en avoir du tout » se disait-elle. Elle n'avait plus de fierté et elle avait donc perdu tout intérêt pour les activités sociales. Devant ses incapacités, madame était en rébellion. À domicile, elle refusait de s'adapter à ses difficultés en affirmant que cet état était temporaire. Par exemple, elle refusait les stratégies de balayage visuel nécessaires pour compenser son hémianopsie de même que les moyens compensatoires pour s'adapter à ses difficultés mnésiques. Elle n'arrivait jamais à terminer les tâches

qu'elle entreprenait, en grande partie à cause de son refus de s'adapter à ses limitations. Elle abandonnait alors tout dans un sentiment d'échec complet.

Lorsque Mme R. parlait de la perte de ses fonctions, elle exprimait le sentiment d'avoir été « *dépossédée* » de sa santé physique et psychologique; elle avait le sentiment d'avoir laissé le plus gros « morceau d'elle-même » au centre de traumatologie et conservait en elle le désir de « reprendre toutes les parties qu'elle avait éparpillées derrière elle ». De façon défensive, Mme R. luttait continuellement pour maintenir le contrôle sur ses émotions. Elle avait très peur « d'être envahie par ses émotions », de perdre le contrôle et de « devenir folle ». Elle était, selon elle, la seule à blâmer et cela lui enlevait le droit de se plaindre. S'astreignant au silence, elle arrivait à oublier et à s'éloigner de ce qui l'angoissait. Une grande vulnérabilité et le sentiment qu'elle n'avait plus aucun contrôle sur sa vie demeuraient malgré tout.

La psychothérapie psychanalytique de Mme R.

Conformément à l'organisation particulière de sa personnalité, les réactions psychologiques de Mme R. étaient complexes et l'empêchaient de profiter pleinement de son programme de réadaptation. C'est le cas des personnes présentant à la fois un désordre neurologique et un trouble de la personnalité, et qui ne peuvent être traitées de façon significative uniquement dans une perspective de réadaptation cognitive ou neuropsychologique (Lewis & Rosenberg, 1990). Malheureusement, bien souvent, ils

ne bénéficient pas non plus d'un traitement psychologique traditionnel étant donné leurs atteintes neurologiques. D'où la nécessité d'adapter le cadre de la psychothérapie intensive pour accueillir ces clients. Dans une série d'articles, Lewis (1986, 1991; Lewis et al., 1992) démontre comment il est possible d'adapter la PP aux besoins particuliers des personnes ayant subi un TCC et propose un cadre de référence pour développer une telle pratique. Selon l'auteure, pour augmenter les chances qu'une PP soit profitable pour la personne, quatre facteurs doivent être évalués et pris en compte dans la démarche: 1) l'atteinte cérébrale et les *séquelles cognitives* qui peuvent avoir un impact sur la psychothérapie; 2) les *facteurs psychologiques* (ex.: traits de personnalité, fonctions générales des instances de la personnalité) qui existent indépendamment de l'atteinte cérébrale; 3) la *signification et l'impact psychologique* des déficits sur le client; et 4) le contexte social dans lequel évolue la personne. Ces facteurs mis ensemble permettront de prédire les réactions de la personne envers la psychothérapie, les conditions sous lesquelles l'alliance thérapeutique pourra se développer, la façon dont la personne pourra se raconter et comment la psychothérapie pourra s'adapter aux besoins particuliers de cette dernière. Généralement, la PP sera un mélange flexible et judicieux entre des techniques de soutien et de remédiation cognitive d'une part, et des techniques d'introspection et d'interprétation d'autre part, selon les besoins de la personne à un moment donné. Nous référons le lecteur à Lewis (1986) pour une illustration des différentes possibilités techniques à l'intérieur d'une PP auprès des personnes avec

TCC. Le cas de Mme R. sera maintenant revu à partir des trois premiers facteurs mentionnés plus haut.

Afin d'alléger l'impact des *déficits cognitifs* sur le processus thérapeutique, le thérapeute et l'environnement thérapeutique doivent initialement prendre en charge les fonctions perdues associées à l'atteinte cérébrale (Lewis, 1991). L'évaluation neuropsychologique permettant d'identifier ces dysfonctions prend alors toute son importance pour assurer le bon déroulement de la psychothérapie. Parmi les troubles cognitifs de Mme R., les troubles mnésiques étaient ceux qui avaient le plus d'incidence sur la psychothérapie : le rappel du contenu d'une séance à l'autre était faible et dépendait des procédures d'indiçage. Par ailleurs, il lui était impossible de prendre des notes durant ou après les rencontres étant donné ses troubles visuo-perceptuels sévères. Parmi les moyens compensatoires adaptés à ses capacités résiduelles, il y avait l'enregistrement (sur un magnétophone portatif) d'un bref résumé de chaque rencontre avec l'aide de son psychothérapeute. Cela lui permettait de décider, après avoir écouté l'enregistrement au début d'une séance, si elle voulait poursuivre le thème abordé à la séance précédente ou aborder un nouveau thème. Il est important de préciser que malgré les difficultés de rappel explicite de Mme R., cette dernière faisait des apprentissages significatifs (possiblement sur les plans implicite et émotif) et des changements importants se profilaient de manière constante au niveau psychodynamique.

Afin d'adapter la psychothérapie aux limites cognitives de la personne, il est important de bien distinguer les aspects déficitaires et les éléments dynamiques, c'est-à-dire les symptômes directement associés à l'atteinte cérébrale et ceux qui proviennent de l'activation d'un processus défensif résultant de l'émergence d'un conflit psychologique contenu jusqu'alors (Lewis, 1986). Par exemple, il était courant pour Mme R. de s'évanouir durant la séance après avoir parlé de sa sexualité; une fois réveillée, elle avait tout oublié. Ce symptôme, tout comme la difficulté à la marche au réveil, les vertiges, les nausées et les maux de tête s'inscrivent dans les crises paroxysmiques (attaque de sommeil) et les troubles de conversion d'allure neurologique (paralysie de la marche et manifestations viscérales) de l'hystérie (Bouchard, 2000). Cette impression clinique a été confirmée par un examen neurologique et neuroendocrinien. En outre, il ne faut pas écarter la possibilité que les aspects déficitaires et dynamiques interagissent entre eux et puissent se renforcer mutuellement; les déficits semblent alors être au « service » de la défense (ou de la pulsion selon le cas). Par exemple, dans le cas de Mme R., la fatigabilité, les acouphènes et les troubles vestibulaires résiduels du TCC (voir p. 12) pouvaient interagir avec la symptomatologie hystérique. De la même manière, les troubles visuo-perceptuels, l'hypersensibilité au bruit ainsi que le besoin de réduire de façon générale les sources de stimulation pouvaient interagir avec son agoraphobie. La relation entre les désordres psychologiques et neurologiques est complexe et les liens de causalité et de détermination peuvent aller dans les deux directions (Lewis, 1986).

L'évaluation des *facteurs psychologiques* qui peuvent exister indépendamment de l'atteinte cérébrale misera dans un premier temps sur l'évaluation de la personnalité pré morbide. Selon Lewis & Rosenberg (1990), il est important de considérer le niveau d'organisation de la personnalité antérieure, ce qui inclut la perception de soi et des autres, la cohérence de l'identité, la configuration pulsion-défense, la capacité à moduler et à faire l'expérience des émotions et des conflits (voir Kernberg, 1984). Le niveau de développement atteint sur le plan psychologique avant le TCC, particulièrement le niveau d'articulation de ce que l'on nomme les fonctions du Moi, influencera grandement la façon dont la personne se perçoit, ce qui à son tour modulera sa capacité à s'adapter à sa condition neurologique. L'histoire personnelle de Mme R. permet de faire ressortir des enjeux importants autour de sa sexualité ainsi que la nature de son conflit organisé dans la sphère hystérique. D'abord, on remarque *l'aspect trompeur de son caractère* qui cache un univers de désirs qu'elle est la seule à ne pas voir. Ses désirs les plus menaçants sont bien maintenus hors de la conscience par l'effet du refoulement et cela explique la « belle insouciance » qu'elle manifeste devant toute sa sexualité problématique. Elle est à l'abri de la culpabilité surmoïque. Dans son esprit conscient, elle n'a rien à se reprocher, si ce n'est son désir de faire plaisir, que les hommes interprètent mal. Elle est toujours la première surprise lorsque la vérité éclate et que le « chat sort du sac »! Ce qu'on ne voit pas, ce qui semble transformé en son contraire grâce à la formation réactionnelle, ce sont ses désirs de séduire et de bien paraître (exhibitionniste). Ces désirs se manifestent plutôt dans sa grande volonté à demeurer indépendante, à faire les choses seules, à sa façon (traits

obsessionnels), loin des regards, de l'envie des femmes et de l'admiration des hommes. Elle évite les rôles de princesse au théâtre et les « projecteurs de la gloire » qui pourraient lui venir de ses exploits sportifs. Un compromis semble enfin se dessiner après son mariage dans son grand dévouement pour sa communauté où elle s'occupe de tout, de façon exceptionnelle, et finit par faire l'admiration des autres.

Un autre élément de son conflit hystérique est pressenti dans ses *rapports érotisés mais non sexualisés avec les hommes*. Un ami depuis toujours se transforme en « prince charmant » sous l'effet troublant d'un seul baiser. Les désirs sont alors incontournables, la belle insouciance disparaît et le conflit devant le Surmoi très punitif apparaît au grand jour. Selon ses fantasmes, elle vit alors sous la menace d'être victime et dépendante de l'homme qui l'a séduite. Le refoulement ne suffit plus, c'est la projection qui prend la relève en prêtant aux hommes ses désirs sexuels interdits et en les évitant en tant qu'objet phobique. Ses choix d'objets semblent également gouvernés par la menace phobique et elle se retrouve mariée à une figure moins érotisée mais combien plus sécurisante.

Un dernier aspect important de son conflit se joue autour de son *être corporel*. Les désirs sexuels semblent avoir trouvé une issue à travers un surinvestissement corporel, mais auquel elle se garde bien de prêter attention. Son corps n'a rien de spécial et les hommes sont ridicules de le regarder. Un corps attirant pourrait attirer les hommes! Elle se doit donc d'exercer un contrôle absolu sur ce corps. Derrière la

femme prude se cache peut-être la femme charnelle, immorale. En somme, on peut comprendre tous les efforts accrus pour conserver son indépendance (même physique en refusant de prendre la voiture durant ses déplacements) comme une tentative de conserver le contrôle sur son corps et ultimement, sur ses désirs sexuels. Considérant le transfert de type passif-dépendant (discuté plus loin) que la cliente a établi en psychothérapie, ainsi que la présence de multiples troubles somatoformes dans sa symptomatologie, Mme R. présente un tableau hystérique de niveau intermédiaire sur un continuum psychopathologique structural (Bouchard, 2000).

Un dernier élément d'anamnèse à relever : *l'accident d'automobile* qui lui a permis de se rebeller contre ses tabous et de vivre une sexualité épanouie. Cet évènement associé au plaisir ainsi qu'à la culpabilité entrera en résonance avec certaines circonstances qui ont suivi le TCC. Nous reviendrons sur ce point quand il sera question de l'impact psychologique des déficits ou des évènements.

Après son TCC, privée de ses processus défensifs, Mme R. est replongée dans l'angoisse, la culpabilité et la dépression. La perte de son indépendance lui manque cruellement. Elle ne peut plus exercer son rôle actif de femme forte et efficace aux yeux de tous, et cela la prive d'un apport narcissique important. Elle a perdu son image et elle n'a plus de fierté; on risque de la comparer à ce qu'elle fût auparavant et de découvrir l'infériorité de son nouveau Soi. Elle tente, tant bien que mal, de nier la réalité pour adoucir sa révolte mais celle-ci la rattrape constamment. Elle n'a plus

qu'à rester dans son lit, à l'abri des regards critiques. Cependant, il n'y a pas que la révolte dans son expérience subjective, mais aussi la culpabilité. C'est pourquoi la perte de son indépendance et de ses rôles sociaux signifie également la perte de son contrôle corporel. Elle se sent très coupable devant la perte de ses fonctions, elle ne se donne pas le droit d'en parler, elle est la seule à blâmer pour ses difficultés. Son corps ne lui obéit plus, elle est devenue dépendante et cela à plusieurs égards. Elle se doit maintenant de réprimer toutes ses émotions du mieux qu'elle le peut, privée de ses moyens habituels, sinon elle risque de devenir folle. La montée d'angoisse est donc à la source des symptômes phobiques et des crises paroxystiques servant de compromis entre le désir et l'interdit. Pour comprendre ces symptômes hystériques, il est nécessaire de dégager leur signification psychologique sous-jacente. Elle a le sentiment qu'elle ne se possède plus depuis son séjour au centre de traumatologie. Ce sentiment d'avoir été *dépossédée* sera l'élément clé de la signification psychologique de son accident.

La *signification* (ou l'impact psychique) des déficits et des événements qui ont précédé ou suivi l'accident se dévoile habituellement peu à peu à travers le processus psychothérapeutique. Lewis et Rosenberg (1990) rappellent l'importance d'encourager une attitude de réflexion sur les émotions négatives même chez la personne TCC. Selon ces auteurs, les techniques de distraction visant à distraire le client lorsqu'il est dérangé afin de lui éviter une réaction catastrophique ne sont pas toujours productives et appropriées pour toutes les émotions; elles peuvent au

contraire mener à une anxiété flottante, généralisée et peu comprise en raison justement de ses charges affectives (e.g. rage, colère, honte, etc.) laissées pour compte. Le rôle de la PP sera plutôt d'aider le client à développer sa capacité à réfléchir sur ses émotions (parfois pénibles), d'en rechercher la signification et ultimement de les utiliser de façon adaptative. Mme R. n'avait généralement pas conscience de ses sentiments durant les séances. Le travail de la psychothérapie consistait donc à amener la cliente à prendre conscience de ses défenses rigides et massives devant ses émotions et de les rattacher à l'angoisse de perdre le contrôle. De cette façon, Mme R. apprenait graduellement à exprimer ses émotions sans en avoir peur. L'analyse des rêves fut aussi très utile, en montrant les contrastes par exemple entre le contenu de sa pensée diurne et celui de sa pensée onirique. Mme R. faisait ainsi beaucoup de cauchemars où il y avait des batailles, où elle devait trouver des solutions, où elle n'avait pas le contrôle de la situation. Voici un rêve qui illustre ce conflit:

> « Je suis dans une grande salle: à côté, il y a quelque chose de terrible qui se passe. Je dois agir mais à la porte, il y a un gros chien qui m'empêche d'entrer. Je m'approche et le gros chien m'attrape la jambe. Je ressens une grande douleur et je me demande quoi faire pour qu'il me lâche. Je veux le mordre mais j'ai peur qu'il arrive quelque chose à mes yeux. Je trouve donc un endroit où le mordre; je lui mords la jambe et je le tiens entre mes dents. »

Le rêve permet à Mme R. d'avoir accès à son agressivité et d'en prendre conscience. À partir des associations de la cliente sur son rêve, il a été possible de découvrir une régression au stade oral-sadique. Dans le rêve, on peut voir la lutte que la cliente mène pour reprendre son indépendance, sauvagement attaquée et qui lui fait très mal : le chien qui lui mord une jambe et qui occasionne une grande douleur. La marche permet à l'enfant de faire ses premières expériences de séparation d'avec sa mère. Lorsqu'elle était petite, Mme R. se sentait fragile lorsqu'elle ne trouvait pas sa mère à son retour à la maison. Dans sa vie diurne, Mme R. semble avoir peur de perdre ses proches dans un accident de voiture et d'être abandonnée à son sort dans des grands espaces. Sur un autre plan, l'angoisse de séparation semble confirmée par la crise suicidaire que la cliente a connue avant le transfert de son dossier vers un nouveau centre de réadaptation et par ses difficultés à accepter la fin du traitement. Derrière la grande indépendance de Mme R. se cachait toujours une angoisse d'abandon.

Selon Lewis & Rosenberg (1990), il existe deux thèmes répétitifs et communs émergeant de la psychothérapie des personnes TCC : l'anxiété et le contrôle de l'affect d'une part, et les problèmes d'estime de soi et d'identité d'autre part. Parmi les raisons qui expliquent que les personnes TCC se retrouvent avec un niveau d'anxiété plus élevé et une détresse psychologique plus grande suite à leur accident, il y a la diminution des capacités à faire appel aux mêmes processus défensifs et stratégies d'adaptation que ceux qui prévalaient en contexte pré morbide. Chez Mme R., la perte de ses capacités physiques nécessaire à la mise en œuvre de son

indépendance (formation réactionnelle) semble associée avec une montée de son angoisse à contrôler ses émotions (plus profondément ses pulsions sexuelles comme nous allons le voir). D'autre part, la réactivation d'un conflit psychologique antérieur non résolu peut aussi contribuer à l'augmentation du niveau de détresse psychologique. Cette raison permet de mieux comprendre chez Mme R. l'impact psychologique de son accident et de se rapprocher de son noyau traumatique. En effet, après une année de psychothérapie, Mme R. arrive à s'ouvrir péniblement sur une des sources importantes qui a déclenché son *traumatisme psychologique*. Lors de son hospitalisation au centre de traumatologie (on lui avait rapporté ces faits après sa période de désorientation), elle était forcément dépendante de son environnement et son corps a été manipulé par des mains étrangères. Elle ne « possédait » plus ni sa tête ni son corps. L'émotion fut intolérable : elle s'est sentie « violée dans sa plus profonde intimité ». À cela se sont ajoutés un ressentiment pour les gens qui l'ont soignée et une immense honte devant cet échec sur son contrôle corporel. Elle a perdu le goût de voir quiconque pendant un an. Elle a éprouvé un désir de s'éloigner, de s'effacer. Le récit de ces évènements durant la séance a été accompagné d'une charge affective d'une telle intensité qu'on aurait dit qu'elle revivait l'expérience. Des éléments de dramatisation théâtrale étaient manifestes. Ce fut aussitôt suivi d'un sentiment d'en avoir trop dit, de s'être trahie, d'avoir à nouveau perdu le contrôle (notamment de ses paroles) et de dérailler.

Il y a un lien dynamique entre ces évènements autour des soins corporels faisant suite au TCC et d'autres évènements de la vie passée de la cliente. D'abord, l'accident de voiture qu'elle a subi avant son mariage est entré en résonance avec les soins corporels par leur signification autour de la rupture de ses tabous sexuels. Seulement, dans le premier cas (temps 1 du trauma), cette rupture a été vécue positivement dans le contexte d'une relation de confiance, alors que dans le second (temps 2 du trauma), cette rupture a été vécue comme un « viol » alors qu'il ne s'agissait que de gestes bienfaiteurs. La forte culpabilité associée au plaisir vécu durant l'accident pré-mariage n'était pas liquidée. Cette trace mnésique a été remaniée par les soins corporels prodigués « de force » leur conférant ainsi une charge affective intolérable apparentée à un crime sexuel. Si la culpabilité lors des soins corporels fut si forte, c'est bien parce que la cliente a ressenti du plaisir durant cette expérience et que ce plaisir fut traumatisant. D'autres évènements passés ont pu aussi jouer un rôle dans la genèse de ce trauma, comme par exemple l'expérience très inconfortable rapportée par madame où elle a du prodiguer des soins à un ami grièvement malade pendant qu'il était nu.

Durant sa psychothérapie, Mme R. a été encouragée à ne pas se trahir et à écouter son « vrai Soi ». Elle fut amenée à établir plusieurs liens, entre autres, entre cette expérience traumatique récente et d'autres expériences de son passé où elle avait également eu le sentiment d'avoir perdu le contrôle de son corps, entre les symptômes paroxystiques présents et passés. Par exemple, les attaques de sommeil après avoir

parlé de sa sexualité durant la psychothérapie et l'évanouissement après sa première expérience sexuelle. Au fil du travail d'élaboration psychique, Mme R. est arrivée à parler des soins corporels reçus en traumatologie de manière plus calme et plus réaliste, à y voir des gestes soignants et bienfaiteurs plutôt que d'y voir des agressions. Plutôt que de bloquer ces souvenirs, elle s'est intéressée à cette période de sa réadaptation et elle a commencé à poser des questions.

Par la suite, Mme R. a pu s'ouvrir à d'autres enjeux très importants pour son adaptation psychologique à sa nouvelle condition, soit le deuil de certaines de ses qualités intellectuelles et son conflit hystérique, *les deux étant étroitement reliés*. L'altération perçue de ses fonctions intellectuelles la privait de ses rôles actifs et cela avait pour conséquence de la laisser devant des désirs sexuels très culpabilisants. Madame a développé un transfert érotisé envers son psychothérapeute. Une dépendance et un lien d'attachement très fort se sont créés envers le psychothérapeute perçu comme une figure masculine idéalisée ayant été capable de franchir avec respect les frontières de son intimité et devenant du même coup porteur de ses trésors secrets. Le thérapeute était aussi perçu comme une victime indignée des sentiments de la cliente qui prendrait bientôt la fuite. Il est facile de voir les liens entre les rôles transférentiels prêtés au thérapeute et les enjeux inconscients de Mme R., dont elle n'avait jamais pris conscience dans sa vie. C'est à travers *le travail d'interprétation répété du transfert* (e.g. perlaboration) que madame a évolué lentement suivant un cycle continuel entre désirs exprimés, culpabilité ressentie, processus défensifs

propres au caractère hystérique (formation réactionnelle, refoulement, projection, fantasmes sado-masochistes, acting out) et assouplissement des interdits accompagné de sentiments d'acceptation et de respect envers soi. Le travail d'interprétation (pôle analytique) était souvent complété par des interventions éducatives (pôle de soutien) portant sur la reprise de certains rôles antérieurs de façon adaptée. Cela avait pour but de susciter l'intérêt et la confiance de Mme R. à interagir davantage avec ses enfants dans un contexte de jeu et d'échanges (vs. implication intellectuelle dans leur éducation), à sortir du domicile, à voir des amis, à faire des activités plaisantes, à se sentir encore qualifiée et utile dans des activités de bénévolat auprès de personnes démunies.

Au bout de ce travail, Mme R. s'est sentie transformée. Elle pouvait parler de ses sentiments plus librement qu'elle ne l'avait jamais fait auparavant. Elle s'est sentie plus légère et libérée de ses sentiments de honte et d'une grande partie des tabous. Par exemple, elle a exprimé qu'elle était une grande romantique mais qu'elle avait toujours eu peur de ses désirs et c'est pourquoi elle ne s'était jamais permise de liberté. Aujourd'hui, elle veut « exploser » en réalisant certains de ses désirs, « sortir de la noirceur et voir la lumière du soleil ». Ses craintes des accidents et du jugement social avaient aussi diminué suffisamment pour lui permettre de faire quelques activités de bénévolat et de participer à un voyage. En somme, Mme R. s'est graduellement ouverte à certaines adaptations vis-à-vis de sa nouvelle condition (début de la fin de la rébellion). Elle pouvait aussi concevoir la fin de la thérapie de

façon acceptable même si cela demeurait très pénible. Sa survie, dit-elle, n'en dépendait plus.

Le TCC entraîne des pertes multiples et parmi les plus difficiles à intégrer pour la victime, il y a la *perte profonde du sens de soi, de son identité propre* (Lewis & Rosenberg, 1990). La psychothérapie vise à aider la personne à faire le deuil d'une partie de son identité pré accident. Elle cherche aussi à construire un nouveau sens de soi qui tient compte des limites actuelles et de la continuité qui existe entre le Soi d'avant et le Soi actuel, post-TCC (Stern, 1985). Ces similitudes peuvent être explicites ou parfois implicites. Par exemple, Mme R. a développé en psychothérapie une meilleure compréhension de son besoin de contrôle qui existait avant son accident et qui l'a tant perturbée suite à celui-ci; elle s'est montrée en mesure de remettre en question la sévérité de ses tabous et de les assouplir de façon à être plus spontanée, plus indulgente envers ce corps qui ne lui obéit pas toujours, surtout depuis son TCC. Elle a développé un nouveau sens à sa vie en se sentant encore utile, en exigeant moins d'elle-même et en reprenant un rôle plus actif dans les événements quotidiens.

Limites de la PP chez les personnes TCC

La PP ne peut s'appliquer qu'à certaines personnes ayant subi un TCC selon la sévérité des atteintes cérébrales et selon la nature des troubles cognitifs. Les personnes qui présentent des troubles sensori-moteurs, des problèmes mnésiques, des

troubles visuo-perceptuels, des problèmes de langage légers, et des troubles d'abstraction ont un meilleur pronostic à profiter d'une telle démarche que ceux qui présentent un syndrome frontal sévère, de l'apathie, de la persévération, de l'impulsivité et de l'anosognosie (Lewis & Rosenberg, 1990). Ces caractéristiques touchent souvent une grande partie de la clientèle TCC. Néanmoins, le TCC n'étant pas une entité monolithique, ces divers troubles cognitifs peuvent se présenter avec plus ou moins de sévérité. La motivation, les expériences relationnelles antérieures, les capacités à fournir des efforts pour atteindre ses buts, les forces du Moi sont autant de facteurs à considérer pour déterminer l'indication d'une démarche de PP et le pronostic.

Conclusion

L'expérience des personnes ayant subi un TCC comprend des dimensions objectives comme les atteintes neuropsychologiques et une dimension subjective dans laquelle peuvent se jouer des réactions psychologiques complexes. Dans le cas de Mme R., la perte de ses capacités physiques l'avait privée cruellement de ses stratégies défensives devant la menace de sa sexualité. Les soins corporels reçus au centre de traumatologie avaient provoqué un traumatisme psychologique par la rupture brutale de ses tabous sur son contrôle corporel, si important pour elle. Son expérience subjective lui avait laissé une grande vulnérabilité sur le reste de sa vie : elle n'avait plus le contrôle sur quoi que ce soit, elle était paralysée dans l'angoisse et la culpabilité. Son travail du deuil sur ses pertes physiques et cognitives s'était alors arrêté.

Ces réactions psychologiques peuvent parfois empêcher la personne de profiter pleinement d'un programme de réadaptation. La PP tente de mieux comprendre ces enjeux et en propose une approche qui combine l'exploration psychologique et le soutien. Elle offre, de façon complémentaire à la neuropsychologie, une manière d'intervenir auprès de certaines personnes présentant des problèmes psychologiques complexes suite à un TCC et permet de les aider à s'adapter à leur condition neurologique. La présentation du cas clinique illustre bien cette démarche exigeante mais fructueuse.

Références

Bennett, T.L. (1987). Neuropsychological counseling of the adult with minor head injury. Cognitive Rehabilitation, 5, 10-16.

Bouchard, M.A. (2000). L'hystérie, le caractère hystérique névrotique, les personnalités infantiles et hystéroïde, la dissociation. Manuscrit non publié.

Carberry, H. & Burd, B. (1986). Individual psychotherapy with the brain injured adult. Cognitive Rehabilitation, 4, 22-24.

Cicerone, K.D. (1989). Psychotherapeutic interventions with traumatically brain-injured patients. Rehabilitation Psychology, 34, 105-114.

Doucet, P. & Reid, W. (1996), La psychothérapie psychanalytique : une diversité de champs cliniques. Montréal : Gaëtan Morin.

Gagnon, J., Bouchard, M.A., Rainville, C., Lecours, S., & St-Amand, J. (2004). Inhibition and object relations in borderline personality traits after traumatic brain injury. Manuscrit en préparation.

Kernberg, O.T. (1984). Object-relations theory and clinical psychoanalysis. New Jersey: Jason Aronson.

Kaplan-Solms, K. & Solms, M. (1996). Psychoanalytic observations on a case of frontal-limbic disease. Journal of Clinical Psychoanalysis, 5, 405-438.

Kaplan-Solms, K. & Solms, M. (2000). Clinical studies in neuro-psychoanalysis: introduction to a depth neuropsychology. London: Karnac.

Lewis, L. (1986). Individual psychotherapy with patients having combined psychological and neurological disorders. Bulletin of the Menninger Clinic, 50, 75-87.

Lewis, L. (1991). A framework for developing a psychotherapy treatment plan with brain-injured patients. Journal of Head Trauma Rehabilitation, 6, 22-29.

Lewis, L. (1992). Two neuropsychological models and their psychotherapeutic implications. Bulletin of the Menninger Clinic, 56, 20-32.

Lewis, L. & Rosenberg, S.J. (1990). Psychoanalytic psychotherapy with brain-injured adult psychiatric patients. Journal of Nervous and Mental Disease, 178, 69-77.

Lewis, L., Athey, G.I., Eyman, J., & Saeks, S. (1992). Psychological treatment of adult psychiatric patients with traumatic frontal lobe injury. Journal of Neuropsychiatry, 4, 323-330.

Miller, L. (1991a). Freud's brain: neuropsychodynamic foundations of psychoanalysis. New York: Guilford.

Miller, L. (1991b). Psychotherapy of the brain-injured patient: principles and practices. Cognitive Rehabilitation, 9, 24-30.

Ohry, A., Rattok, J., & Solomon, Z. (1996). Post-traumatic stress disorder in brain injury patients. Brain Injury, 10, 687-695.

Oppenheim-Gluckman, H. (2000). La pensée naufragée: clinique psychopathologique des patients cérébro-lésés. Paris: ADAGP, Collection particulière, Angers.

Prigatano, G.P. & Klonoff, P.S. (1988). Psychotherapy and neuropsychological assessment after brain injury. Journal of Head Trauma Rehabilitation, 3, 45-56.

Schacter, D.L. (1986). The psychology of memory. In J.E. LeDoux & W. Hirst (Eds), Mind and brain: dialogues in cognitive neuroscience. New York: Cambridge University Press.

Solms, M. (1995). Is the brain more real than the mind? Psychoanalytic Psychotherapy, 9, 107-120.

Solms, M. (1996). Towards an anatomy of the unconscious. Journal of Clinical Psychoanalysis, 5, 331-367.

Solms, M. (1997). What is consciousness? Journal of the American Psychoanalytic Association, 45, 681-703.

Solms, M. & Lechevalier, B. (2002). Neurosciences and psychoanalysis. International Journal of Psycho-Analysis, 83, 233-237.

Solms, M. & Turnbull, O. (2002). The brain and the inner world: an introduction to the neuroscience of subjective experience. New York: Other Press.

Stern, J.M. (1985). The psychotherapeutic process with brain-injured patients: a dynamic approach. Israel Journal of Psychiatry and Related Sciences, 22, 83-87.

Stern, M.J. & Stern, B. (1990). Psychotherapy in cases of brain damage: a possible mission, BrainInjury, 4, 297-304.

Westen, D. (1990). Towards a revised theory of borderline object relations: contributions of empirical research. International Journal of Psycho-Analysis, 71, 661-693.

Conclusion

Cette thèse représente un effort de mise en commun des courants conceptuels de la psychiatrie, de la psychanalyse et de la neuropsychologie, ainsi que des approches cliniques neuropsychologique et psychanalytique, dans le but d'enrichir notre compréhension des changements et désordres de la personnalité des personnes ayant subi un TCC. Elle s'est aussi intéressée à tenter d'élargir notre champ d'intervention pour leur venir en aide.

À partir d'une synthèse des concepts cliniques sous-jacents au DOP et au TPL, il a été possible (article 1) de mettre en lumière des différences fondamentales de leur phénoménologie respective pouvant être masquées par leur similarité de surface. Ces différences semblaient s'organiser autour de deux axes principaux: la qualité des relations d'objet et les capacités cognitives telles que l'inhibition comportementale, le contrôle émotionnel, etc. De plus, la présentation de deux vignettes cliniques a permis de démontrer comment il est possible de poser un diagnostic différentiel entre ces deux entités cliniques et de les concevoir isolément ou en co-morbidité pour rendre compte des désordres de la personnalité de ces patients. Ces précisions sont utiles tant pour la recherche que pour la clinique.

L'étude empirique (article 2) visait à mieux décrire les symptômes et traits limites des sujets TCC et à dégager les facteurs qui interagissent avec ceux-ci. Cette démarche se démarquait des études précédentes rapportant simplement la fréquence du TPL sans le décrire ou tenter de l'expliquer. Les résultats de notre étude ont indiqué que les sujets TCC présentaient davantage de symptômes et traits limites que les sujets contrôles mais que la sévérité de ces phénomènes de même que la fréquence de ce

diagnostic demeuraient peu élevées chez cette population. De plus, les symptômes et traits des sujets TCC sont apparus plus en rapport avec ce que l'on connaît de leurs réactions affectives et psychologiques face aux pertes et conséquences du TCC, tandis que les traits spécifiques connus des « vrais » sujets TPL ne ressortaient pas dans leur présentation clinique.

L'hypothèse de van Reekum et al. (1996a) et de Hibbard et al. (2000) voulant que le TCC représente un facteur de risque dans l'apparition d'un TPL « acquis » est donc remise en question. En outre, si l'on rapproche les résultats de l'étude empirique (article 2) avec les distinctions phénoménologiques fondamentales que l'on peut dégager de leur diagnostic différentiel (article 1), ainsi qu'avec les observations cliniques de patients TCC en psychothérapie (article 3), nous sommes tentés de remettre en question l'existence même du TPL « acquis ». En effet, il semble plus probable d'affirmer que si un TPL est diagnostiqué suite à un TCC, il était davantage enraciné dans la personnalité prémorbide que dans la désinhibition dite frontale ou les troubles de l'identité consécutives au TCC. Les symptômes dysphoriques dits limites que l'on retrouve chez les sujets TCC demeurent mieux décrits dans leur contexte de deuil face aux pertes multiples que dans le contexte de l'axe II. L'importance est ici donnée au diagnostic différentiel et à son utilité dans la prise en charge des sujets TCC avec désordres de la personnalité. Il est essentiel de ne pas confondre les entités cliniques et de ne pas les transposer directement d'un champ psychopathologique à un autre même s'il existe des similarités de surface. Bien que très probable, cette affirmation a besoin d'être appuyée plus solidement par des études auprès d'échantillons plus important de sujets TCC. Cela permettrait de confirmer la

présence de traits limites plus spécifiques au TPL observés (article 2) parmi les sujets chez qui les traits limites prémorbides étaient plus élevés. Une étude comparative entre des sujets TCC et de vrais sujets TPL sur le DIB-R ainsi que sur des mesures psychopathologiques (ex.: BDI: Beck, 1987; SCORS: Westen, 1991) et neuropsychologiques (ex.: Test de fluence verbale: Cardebat, Doyon, Puel, Goulet & Joanette, 1990) permettrait également de mieux circonscrire leurs différences plus fondamentales au niveau de l'impulsivité dite limite (les mesures données en exemple se sont montrées sensibles à la symptomatologie limite). Une telle étude permettrait ainsi de répondre à une question comme celle-ci : est-ce que la consommation abusive à une substance ainsi que les gestes suicidaires que l'on observe dans les deux populations ont des embranchements avec des processus psychopathologiques distincts?

Par rapport à la contribution des facteurs dans la symptomatologie limite, les difficultés d'inhibition d'une réponse motrice n'étaient pas vraiment en jeu alors que le rôle de la personnalité prémorbide et celui de la qualité de l'affect dans les relations d'objet semblaient beaucoup plus significatifs. Aussi, les sujets TCC obtenaient de moins bonnes performances que les sujets contrôles à la tâche d'inhibition mais se comparaient à ces derniers quant à la qualité de leurs relations d'objet. Ces résultats suggèrent que le TCC aurait moins d'impact sur certains éléments structuraux de la personnalité, comme par exemple la qualité affective des représentations objectales, ce qui permettrait d'établir des liens avec la personnalité prémorbide. L'influence de la personnalité prémorbide sur la symptomatologie post-TCC, quoique que bien pressentie en clinique (article 3), n'est pas toujours facile à démontrer de manière

empirique (Kozol, 1945; Tate, 1998). Une telle observation a donc une certaine valeur sur le plan scientifique. De plus, elle permet de confirmer la contribution des concepts psychanalytiques à la compréhension de la composante prémorbide dans la très citée interaction « déficits neuropsychologiques-réactions psychologiques-personnalité prémorbide » pour rendre compte des changements et désordres de la personnalité faisant suite à un TCC. Cette contribution a été ressentie jusqu'à présent dans la littérature clinique mais non empirique (Lewis, 1986, 1991, 1992 ; Lewis & Rosenberg, 1990 ; Lewis, Athey, Eyman & Saeks, 1992; Oppenheim-Gluckman, 2000; Solms, 1995; Stern, 1985; Stern & Stern, 1990). Un modèle comme celui de Westen (1990), décrivant les relations d'objet à la manière d'un système de représentations cognitivo-affectives activées de façon plus ou moins automatique, peut représenter un terrain fertile sur lequel on peut commencer à construire des hypothèses sur les mécanismes en jeu dans l'émergence et la stabilité du « prémorbide » dans les phénomènes cliniques post-TCC. En effet, les observations de la neuropsychologie à propos des sujets cérébrolésés pouvant conserver un potentiel conçu en tant que processus ou réseaux d'activation automatique par opposition à des processus de contrôle exigeant des efforts conscient et volontaire ont déjà trouvées des applications dans le domaine de la personnalité (Kihlstrom, 1990). L'étude des relations d'objet chez les sujets TCC dans la présente démarche peut être conçue comme étant surtout de nature exploratoire. Il existe plusieurs échelles évaluant d'autres dimensions de ces représentations internalisées de soi et de l'autre pouvant être mises à profit dans notre compréhension des éléments davantage structuraux de la personnalité des personnes avec TCC.

Les données de l'étude empirique invitent également à faire des distinctions importantes entre d'une part, l'impulsivité de type limite et l'impulsivité faisant suite à un TCC (ou l'impulsivité dite organique i.e. la désinhibition sociale, sexuelle, etc.) et d'autre part, entre les mesures de l'impulsivité limite et les mesures neuropsychologiques d'inhibition. Cela confirme les distinctions fondamentales déjà pressenties lors de la démarche précédente visant à comparer la phénoménologie de l'impulsivité limite et de l'impulsivité dite organique. La dimension de l'inhibition serait plus à même de rendre compte de l'impulsivité organique et ne convergerait pas nécessairement vers les facteurs sous-jacents à la pathologie limite. Ces affirmations vont à l'encontre du courant de recherche déjà bien installé du côté des sujets TPL (Dougherty et al., 1999; Hochhausen et al., 2002; van Reekum et al., 1994; van Reekum et al., 1996b). Il est difficile d'expliquer pourquoi un tel lien, entre la désinhibition motrice et l'impulsivité limite, s'avère de plus en plus éprouvé chez les TPL alors qu'il apparaît peu fondé chez les sujets TCC, si ce n'est que de faire valoir les différences entre les deux populations cliniques. Par exemple, les phénomènes d'inhibition chez les sujets TCC sont multiples, complexes et sans liens obligatoires entre eux (Starkstein & Robinson, 1997). De plus, la désinhibition comportementale et les désordres du comportement suite à un TCC sont bien connus pour être hétérogènes et parfois indépendants d'atteintes intellectuelles ou même neuropsychologiques (Eslinger & Damasio, 1985; Lishman, 1978). Ainsi, plus le comportement impulsif est macroscopique et fait entrer en jeu une composante psychopathologique, plus le lien entre celui-ci et les facteurs organiques d'inhibition se dissipe chez les sujets TCC. Ce fait a été observé au niveau de la force d'interaction entre les mesures du DIB-R et du SCORS : cette interaction, bien que

présente, était plus faible chez les sujets TCC que chez les contrôles. De plus, lorsque présent, le lien entre les facteurs neuropsychologiques et les phénomènes limites observé chez les sujets TCC était plutôt de nature négative : plus le sujet est lent, concret et possiblement anosognosique (mais ce trouble n'a pas fait l'objet d'une mesure), moins il se plaint de sa condition et moins il souffre de son état. Une telle observation nous amène très loin de notre postulat de départ voulant que la désinhibition soit en mécanisme explicatif de l'impulsivité limite. Chez les sujets TPL, on pourrait croire que le lien entre désinhibition et impulsivité est alimenté par la présence d'autres facteurs, comme par exemple le tempérament du sujet. Il est en effet connu que les traits d'impulsivité ainsi que les forces ou faiblesses d'inhibition font partie de certains tempéraments (Parker & Bagby, 1997). En somme, l'hypothèse de Hibbard et al. (2000) sur l'existence d'un tel lien chez les sujets avec TCC pourrait être un autre exemple des pièges possibles que sous-tendent les transpositions un peu trop directes d'une réalité clinique à une autre.

Il est important de rappeler que ces dernières affirmations demeurent précaires et cela pour plusieurs raisons. D'abord, les résultats de notre étude empirique ne nous permettent pas d'établir des liens entre désinhibition motrice et impulsivité dite organique (e.g. désinhibition sociale, sexuelle, etc.); aucune mesure de l'impulsivité « organique » telle que l'échelle neurocomportementale des traumatisés crâniens (« Neurobehavioral Rating Scale »: NRS: Levin, High, Goethe, Sisson, Overall, Rhoades, Eisenberg, Kalisky & Gary, 1987) n'était incluse dans l'étude. D'autre part, l'absence de résultat n'est jamais une preuve de l'absence d'un phénomène. Ainsi, le recours à un seul outil (le « Go-no go ») pour l'évaluation des

capacités d'inhibition chez les TCC représente encore une fois des efforts de nature exploratoire. Si d'autres outils indépendants ne permettent toujours pas de faire ressortir un lien entre ces deux facteurs, alors là une conclusion plus ferme pourra être tenue. D'autres recherches utilisant plusieurs outils de mesure sont donc nécessaires pour préciser de façon empirique les interfaces entre l'impulsivité limite et les diverses formes d'inhibition (e.g. motrice, cognitive, comportementale, émotionnelle, etc.). Une taxonomie comme celle de Nigg (2000) pourrait s'avérer utile dans le choix des mesures de plusieurs types d'inhibition. Par exemple, l'inhibition motrice pourrait être mesurée par le « Go-no go » mais aussi le Paradigme du signal d'arrêt (« Stop signal paradigm »; Logan & Cowan, 1984). Il en irait de même pour les autres processus d'inhibition (e.g. contrôle de l'interférence, inhibition cognitive, inhibition venant de la motivation, etc.; voir Nigg, 2000). De manière plus générale, la recherche sur l'impulsivité et de ses différents liens avec les facteurs cognitif, de tempérament, de psychopathologie etc. demeure toujours pertinente pour la compréhension des difficultés comportementales des sujets avec TCC, allant du simple oubli de mettre les freins avant de se lever du fauteuil roulant jusqu'aux gestes inappropriés ou violents. Il pourrait s'agir, par exemple, d'études visant à comparer systématiquement et cela sur plusieurs mesures, deux échantillons de sujets TCC répartis selon leur niveau d'impulsivité; ou bien encore d'études corrélationnelles entre plusieurs variables pertinentes à l'impulsivité chez les sujets TCC. De telles recherches demeurent encore trop peu nombreuses. En outre, le développement d'outils de mesure consacré spécifiquement à l'évaluation des différents types d'impulsivité faisant suite à un TCC pourrait naître de tels efforts. Bien souvent, la désinhibition ne représente qu'un fragment conceptuel à l'intérieur

des instruments conçus pour mesurer les désordres neurocomportementaux chez les sujets TCC (ex.: NRS: Levin et al., 1987).

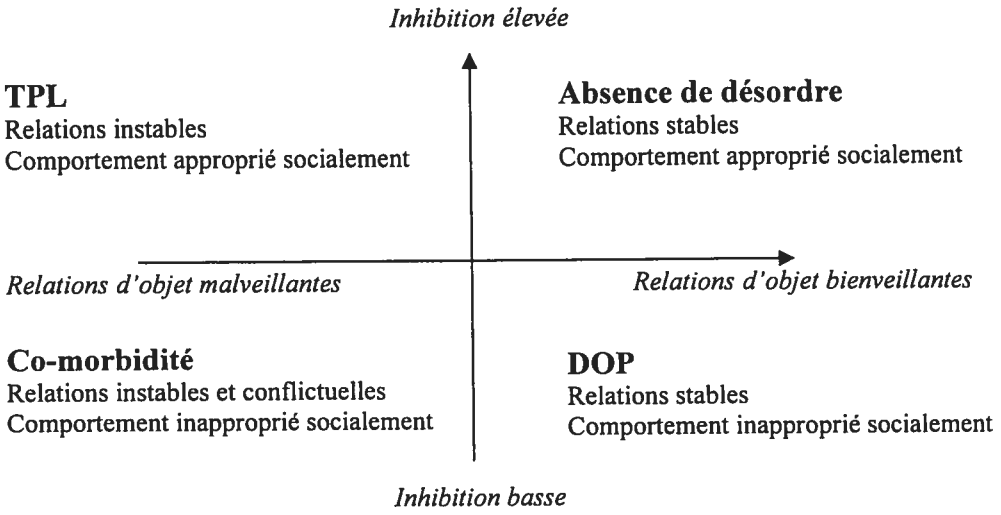
Pour clore la présente démarche, la présentation d'un cas clinique (article 3) a permis de faire ressortir l'importance de s'intéresser à la dimension subjective faisant suite à un TCC pour comprendre la signification des déficits et des évènements post-TCC. Cette signification est en lien étroit avec la personnalité dite prémorbide de l'individu, notamment avec le niveau d'organisation et la maturité des relations d'objet (Lewis & Rosenberg, 1990). Étant donné les limites de l'approche neuropsychologique pour traiter les désordres de la personnalité qui sont davantage issues de la personnalité prémorbide, on se doit de combiner la neuropsychologie avec une approche clinique de psychothérapie. Il a été possible de démontrer comment les approches psychanalytique et neuropsychologique peuvent converger pour venir en aide à ces clients qui présentent des désordres psychologiques importants.

En guise de résumé, le Graphique 1 qui suit illustre sur un plan bi-dimensionnel l'interaction entre les facteurs « inhibition » et « qualité affective des relations d'objet » dans la manifestation des désordres psychiatriques et organiques faisant suite à un TCC. Il y aurait une dimension de la qualité affective des relations d'objet telle qu'évaluée par exemple au moyen du SCORS. Cette dimension serait conçue sur un continuum allant des représentations intériorisées à prédominance malveillante aux relations à prédominance bienveillante. Selon la qualité des relations d'objet, les relations interpersonnelles seraient plus ou moins stables. Cette dimension serait

plutôt associée à la personnalité prémorbide et à la pathologie limite en générale. Une autre dimension existerait cette fois autour des capacités d'inhibition motrice et comportementale. Sur le continuum seraient représenté les capacités allant des plus faibles aux plus élevées. Cette dimension serait davantage en lien avec le TCC et possiblement avec l'impulsivité de type organique (ex.: désinhibition sociale et sexuelle; ce lien n'a pas été vérifié de façon empirique dans la présente étude). Selon le niveau de capacité, le comportement pourrait être plus ou moins approprié socialement. Enfin, l'endroit où le sujet se situe sur les deux dimensions donnerait une valeur prédictive de son statut diagnostic.

Graphique 1

Modèle bi-dimensionnel de l'interaction entre les facteurs « inhibition » et « qualité affective des relations d'objet » dans la manifestation du Trouble de la Personnalité Limite (TPL), du Désordre Organique de la Personnalité (DOP) et de leur co-morbidité faisant suite à un TCC



Références

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision. Washington, DC. American Psychiatric Association, 2000.

Beck, A. (1987). Beck Depression Inventory: manual. San Antonio, Texas: Psychological Corporation.

Cardebat, D., Doyon, B., Puel, M., Goulet, P., & Joanette, Y. (1990). Évocation lexicale formelle et sémantique chez des sujets normaux : performances et dynamiques de production en fonction du sexe, de l'âge et du niveau d'étude. Acta Neurologica Belgium, 90, 207-217.

Dougherty, D.M., Bjork, J.M., Huckabee, H.C.G., Moeller, F.G., & Swann A.C. (1999). Laboratory measures of aggression and impulsivity in women with borderline personality disorder. Psychiatry Research, 85, 315-326.

Eslinger, P.J. & Damasio, A.R. (1985). Severe disturbance of higher cognition after bilateral frontal lobe ablation: patient EVR. Neurology, 35, 1731-1741.

Hibbard, M.R., Bogdany, J., Uysal, S., Kepler, K., Silver, J.M., Gordon, W.A., & Haddad, L. (2000). Axis II psychopathology in individuals with traumatic brain injury. Brain Injury, 14, 45-61.

Hochhausen, N.M., Lorenz, A.R., & Newman, J.P. (2002). Specifying the impulsivity of female inmates with borderline personality disorder. Journal of Abnormal Psychology, 111, 495-501.

Kihlstrom, J.F. (1990). The psychological unconscious, In L.A. Pervin (Ed), Handbook of personality: theory and research (pp. 445-464). New York: Guilford Press.

Kozol, H.L. (1945). Pretraumatic personality and psychiatric sequelae of head injury. Archives of Neurology and Psychiatry, 53, 358-364.

Levin, H.S., High, W.M., Goethe, K.E., Sisson, R.A., Overall, J.E., Rhoades, H.M., Eisenberg, H.M., Kalisky, Z., & Gary, H.E. (1987). The neurobehavioral rating scale: assessment of the behavioral sequelae of head injury by the clinician. Journal of Neurology, Neurosurgery and Psychiatry, 50, 183-193.

Lewis, L. (1986). Individual psychotherapy with patients having combined psychological and neurological disorders. Bulletin of the Menninger Clinic, 50, 75-87.

Lewis, L. (1991). A framework for developing a psychotherapy treatment plan with brain-injured patients. Journal of Head Trauma Rehabilitation, 6, 22-29.

Lewis, L. (1992). Two neuropsychological models and their psychotherapeutic implications. Bulletin of the Menninger Clinic, 56, 20-32.

Lewis, L. & Rosenberg, S.J. (1990). Psychoanalytic psychotherapy with brain-injured adult psychiatric patients. Journal of nervous and mental disease, 178, 69-77.

Lewis, L., Athey, G.I., Eyman, J., & Saeks, S. (1992). Psychological treatment of adult psychiatric patients with traumatic frontal lobe injury. Journal of neuropsychiatry, 4, 323-330.

Lishman, W.A. (1978). Psychiatric sequelae of head injuries: problems in diagnosis. Journal of the Irish Medical Association, 71, 306-314.

Logan, G.D. & Cowan, W.B. (1984). On the ability to inhibit thought and action: a theory of an act of control. Psychological Review, 91, 295-327.

Nigg, J.T. (2000). On inhibition/disinhibition in developmental psychopathology: views from cognitive and personality psychology and a working inhibition taxonomy. Psychological Bulletin, 126, 220-246.

Oppenheim-Gluckman, H. (2000). La pensée naufragée : clinique psychopathologique des patients cérébro-lésés. Paris: ADAGP, Collection particulière, Angers.

Parker, J.D & Bagby, R.M. (1997). Impulsivity in adults: a critical review of measurement approaches, In C.D. Webster & M.A. Jackson (Eds), Impulsivity: theory, assessment, and treatment (pp. 142-157). New York: Guilford Press.

Solms, M. (1995). Is the brain more real than the mind ? Psychoanalytic psychotherapy, 9, 107-120.

Starkstein, S.E. & Robinson, R.G. (1997). Mechanism of disinhibition after brain lesions. The Journal of Nervous and Mental Disease, 185, 108-114.

Stern, J.M. (1985). The psychotherapeutic process with brain-injured patients : a dynamic approach. Israel Journal of Psychiatry and Related Sciences, 22, 83-87.

Stern, M.J. & Stern, B. (1990). Psychotherapy in cases of brain damage: a possible mission, Brain injury, 4, 297-304.

Tate, R.L. (1998). "It is not only the kind of injury that matters, but the kind of head": the contribution of premorbid psychosocial factors to rehabilitation outcomes after severe traumatic brain injury. Neuropsychological rehabilitation, 8, 1-18.

Van Reekum, R., Bolago, I., Finlayson, M.A.J., Garner, S., & Links, P.S. (1996a). Psychiatric disorders after traumatic brain injury. Brain Injury, 10, 319-327.

Van Reekum, R., Links, P.S., & Fedorov, C. (1994). Impulsivity in borderline personality disorder, In K.R. Silk (Ed), Biological and neurobehavioral studies of borderline personality disorder (pp. 1-22). Washington: American Psychiatric Press.

Van Reekum, R., Links, P.S., Finlayson, M.A., Boyle, M., Bolago, I., Ostrander, L.A., & Moustacalis, E. (1996b). Repeat neurobehavioral study of borderline personality disorder. Journal of Psychiatry and Neuroscience, 21, 13-20.

Westen, D. (1990). Towards a revised theory of borderline object relations: contributions of empirical research. International Journal of Psycho-Analysis, 71, 661-693.

Westen, D. (1991). Clinical assessment of object relations using the TAT. Journal of Personality Assessment, 56, 56-74.

Zanarini, M.C., Gunderson, J.G., Frankenburg, F.R., & Chauncey, D.L. (1989). The Revised Diagnostic Interview for Borderlines : discriminating BPD from other axis II disorders. Journal of Personality Disorders, 3, 10-18.

Appendices

Entrevue diagnostique pour les troubles limites de la personnalité
Guttman, H.G. & Laporte, L. (1993)
Traduction du "Revised Diagnostic Interview for Borderline Patients" (DIB-R: Zanarini, M.C., Gunderson, J.G., Frankenburg, F.R., & Chauncey, D.L., 1989)
Version pour sujets traumatisés cranio-cérébraux
(Gagnon, J.R., 2001)

Date : _____

Sujet no : _____

Consigne : « Pour chacune des questions qui vont suivre, vous allez me donner deux réponses; d'abord la première en vous référant aux sentiments ou comportements que vous aviez en général durant les deux ou trois dernières années avant votre TCC, puis la deuxième en vous référant aux sentiments ou comportements que vous avez eu en général suite à votre TCC, plus exactement durant la dernière année à partir de maintenant. »

Cotation : Selon fréquence et/ou intensité (**2 : présent**, tout le temps, plusieurs épisodes, beaucoup; **1 : probable**, épisode isolé, pas tout le temps, aller-retour; **0 : absent**). Faire preuve de jugement clinique dans la cotation. Explorez le quand, combien de fois, comment, dans quel contexte, etc. Aucun item n'est coté comme « présent » sans une certaine confirmation de la part du sujet. En cas de doute sérieux sur une réponse, ne pas coter l'item. La cotation des QS doit s'inspirer des Q précédentes.

SECTION : Émotions

Je vais vous poser des questions sur des problèmes ou des difficultés que vous avez pu avoir et je prendrai quelques notes au fur et à mesure de l'entretien. Je vais aussi vous poser quelques questions sur des comportements que vous avez pu avoir lorsque vous étiez en période plus difficile ou particulièrement fâché.

Dépression

	Pré-TCC	**Post-TCC**
1. Au cours de votre vie, vous êtes-vous senti déprimé ou abattu souvent? (comment vous êtes-vous senti exactement?)	(2, 1, 0)	(2, 1, 0)
2. Avez-vous déjà traversé une période pendant laquelle vous vous êtes senti déprimé à la journée longue, presque tous les jours? Combien de temps ça a duré? (aussi longtemps que 2 semaines?)	(2, 1, 0)	(2, 1, 0)
3. S.1. LE PATIENT SOUFFRE D'UNE DÉPRESSION CHRONIQUE MODÉRÉE OU A VÉCU UN OU PLUSIEURS ÉPISODES DE DÉPRESSION MAJEURE	**(2, 1, 0)**	**(2, 1, 0)**
4. Avez-vous eu des périodes où vous aviez des sentiments d'impuissance pendant plusieurs jours ou plusieurs semaines de suite?	(2, 1, 0)	(2, 1, 0)
5. …Etes-vous souvent pessimiste face à l'avenir (La vie en noir)	(2, 1, 0)	(2, 1, 0)

6. …Avez-vous souvent tendance à vous rabaisser? Vous sentir bon à rien?	(2, 1, 0)	(2, 1, 0)
7. …Vous sentez-vous coupable pour des choses que vous avez faites ou pas faites? (pas seulement de la culpabilité ou des reproches vis-à-vis sa maladie)	(2, 1, 0)	(2, 1, 0)
8. …S.2. LE PATIENT A CONNU DES SENTIMENTS PROLONGÉS D'IMPUISSANCE, DE DESESPOIR, D'INUTILITÉ OU DE CULPABILITÉ	**(2, 1, 0)**	**(2, 1, 0)**

Colère

9. Est-ce que vous vous sentez en colère très souvent?	(2, 1, 0)	(2, 1, 0)
10. Est-ce que vous vous sentez souvent furieux ou enragé?	(2, 1, 0)	(2, 1, 0)
11. Etes-vous souvent sarcastique?	(2, 1, 0)	(2, 1, 0)
12. Avez-vous tendance à argumenter tout le temps avec tout le monde?	(2, 1, 0)	(2, 1, 0)
13. Est-ce que vous avez souvent des accès de colère? Est-ce que vous vous choquez facilement? (grimper dans les rideaux, soupe au lait)	(2, 1, 0)	(2, 1, 0)
14. S.3. LE PATIENT S'EST SENTI TRÈS EN COLÈRE DE FAÇON CHRONIQUE ET A FRÉQUEMMENT AGI DE FAÇON COLÉRIQUE (I.E. A SOUVENT ÉTÉ SARCASTIQUE, ARGUMENTE OU SE CHOQUE FACILEMENT)	**(2, 1, 0)**	**(2, 1, 0)**

Anxiété

15. Etiez-vous très anxieux très souvent?	(2, 1, 0)	(2, 1, 0)
16. Avez-vous souvent eu des symptômes physiques reliés à la tension tels que de la misère à respirer, sentir votre cœur battre trop vite, trop fort, anormalement trembler, être tout en sueur (transpirer beaucoup)? (symptômes reliés à la tension)	(2, 1, 0)	(2, 1, 0)
17. Est-ce qu'il a des choses qui vous font particulièrement peur, comme aller en avion, les hauteurs, la vue du sang, certains insectes? Etes-vous très dérangé par la peur de …? (peur irrationnelle/phobie)	(2, 1, 0)	(2, 1, 0)
18. Avez-vous déjà eu des attaques de panique où, tout d'un coup, vous avez eu peur, vous vous êtes senti anxieux ou extrêmement inconfortable?	(2, 1, 0)	(2, 1, 0)
19. S.4. LE PATIENT S'EST SENTI ANXIEUX DE FAÇON CHRONIQUE OU A SOUFFERT FRÉQUEMMENT DE SYMPTÔMES PHYSIQUES RELIÉS À L'ANXIÉTÉ	**(2, 1, 0)**	**(2, 1, 0)**

Autres émotions dysphoriques

20. Est-ce que ça vous est arrivé très souvent de vous sentir très seul?	(2, 1, 0)	(2, 1, 0)
21. Est-ce que vous vous ennuyez souvent?	(2, 1, 0)	(2, 1, 0)
22. Est-ce que vous vous sentez vide à l'intérieur? (comme une brûlure qui fait mal)	(2, 1, 0)	(2, 1, 0)
23. S.5. LE PATIENT PRÉSENTE DES SENTIMENTS CHRONIQUES DE SOLITUDE, D'ENNUI OU DE VIDE	**(2, 1, 0)**	**(2, 1, 0)**

Items divers

24. Est-ce que vous avez souvent des hauts et des bas dans votre humeur? Est-ce que vous trouvez que vous humeur passe de la dépression à la colère à l'anxiété dans l'espace de quelques heures ou de quelques jours? Etes-vous une personne qui change souvent d'humeur (instabilité affective)	(2, 1, 0)	(2, 1, 0)
25. Avez-vous déjà eu des périodes de quelques jours ou semaines durant lesquelles vous vous sentiez « high » ou euphorique, sans aucune raison apparente? Avez-vous déjà eu des périodes où vous étiez extrêmement irritable? Durant ces périodes aviez-vous beaucoup moins besoin de sommeil que d'habitude? Durant ces périodes étiez-vous plus sociable et parliez-vous beaucoup plus que d'habitude? Est-ce que des gens ont remarqué ces épisodes? Qu'ont-ils dit? Étiez-vous plus productif, énergétique ou vos pensées étaient-elles plus claires qu'à l'habitude? Avez-vous fait des choses de façon impulsive, qui sont inhabituelles pour vous? (épisodes hypomaniaques)	(2, 1, 0)	(2, 1, 0)

Échelle : affective	**Score total (0-10) :**	**Score total (0-10) :**

Score de la section :
2 si le score est de 5 ou plus (avec un score de 2 pour S.3 et pour S.5)
1 pour toutes les autres combinaisons de 5 ou si le score est de 3 ou 4
0 si le score est de 2 ou moins ou si le patient a connu des épisodes d'hypomanie

	Score section (0-2) :	**Score section (0-2) :**

SECTION : Cognitions

Je vais maintenant vous poser des questions au sujet d'expériences peu courantes que les gens ont parfois.

Pensées bizarres/expériences perceptuelles inhabituelles
(il faut que ce soit le sujet qui ait ces pensées, et non pas une autre personne même si le sujet y croit)

28. Etes-vous une personne très superstitieuse? De quelle façon?	(2, 1, 0)	(2, 1, 0)
29. Avez-vous déjà eu des expériences surnaturelles? Pensez-vous souvent que vos pensées, vos actions peuvent causer des choses ou prévenir certaines choses d'arriver d'une façon spéciale ou magique? (pensée magique)	(2, 1, 0)	(2, 1, 0)
30. Avez-vous l'impression d'avoir un sixième sens, i.e. être plus sensible ou perceptif aux autres et à leurs sentiments?	(2, 1, 0)	(2, 1, 0)

31. Avez-vous l'impression d'être capable de dire ce que les autres gens pensent ou ressentent en utilisant des pouvoirs spéciaux comme la télépathie? Croyez-vous que les autres peuvent savoir ce que vous pensez ou ressentez en utilisant cette sorte de pouvoir? (Télépathie)	(2, 1, 0)	(2, 1, 0)
32. Avez-vous déjà eu des expériences de clairvoyance, comme par exemple pouvoir prédire l'avenir ou avoir des visions de ce qui se passe en quelque part d'autre? (Clairvoyance)	(2, 1, 0)	(2, 1, 0)
33. Avez-vous déjà eu des pensées dont vous ne pouviez vous débarrasser même si les gens vous disaient toujours que ce n'était pas vrai? (comme par ex. que vous êtes trop gros même si vous êtes très mince) (idées « overvalued »)	(2, 1, 0)	(2, 1, 0)
34. Avez-vous pris des objets ou des ombres pour des personnes ou pris des bruits pour des voix? Avez-vous souvent eu la sensation qu'une personne ou une force était aux alentours de vous et ce, même si vous ne pouviez pas la voir? (Illusions récurrentes)	(2, 1, 0)	(2, 1, 0)
35. Est-ce que vous vous êtes senti fréquemment irréel, comme si certaines parties de votre corps changeaient de formes, de grandeur, ou étaient bizarres. Comme si vous vous voyiez de loin? (Dépersonnalisation)	(2, 1, 0)	(2, 1, 0)
36. Est-ce que ça vous est arrivé souvent que les choses autour de vous vous ont semblées irréelles? Comme si les choses étaient bizarres ou changeaient de formes ou de grandeur. Comme s'il y avait une fenêtre entre vous et le monde. (étrangeté du réel)	(2, 1, 0)	(2, 1, 0)
37. S.6. LE PATIENT EST PORTÉ À AVOIR DES PENSÉES BIZARRES OU DES EXPÉRIENCES PERCEPTUELLES INHABITUELLES (PENSÉE MAGIQUE, ILLUSIONS RÉCURRENTES, DÉPERSONNALISATION)	**(2, 1, 0)**	**(2, 1, 0)**

Expériences paranoïdes non délirantes

38. Etes-vous souvent sur vos gardes, méfiant? Est-ce qu'il vous arrive souvent de ne pas faire confiance aux gens? (suspicion indue)	(2, 1, 0)	(2, 1, 0)
39. Avez-vous déjà eu l'impression que les gens parlaient de vous dans votre dos, vous dévisageaient ou riaient de vous? (idée de référence)	(2, 1, 0)	(2, 1, 0)

40. Est-ce que vous pensez souvent que les gens essaient de rendre votre vie difficile? Ou qu'ils essaient « de vous avoir »? Que les gens profitent de vous ou qu'ils vous blâment pour des choses que vous n'avez pas faites? (autres idées paranoïdes)	(2, 1, 0)	(2, 1, 0)
41. S.7. LE PATIENT A SOUVENT DES EXPÉRIENCES PARANOÏDES TRANSITOIRES, NON-HALLUCINATOIRES (I.E. MÉFIANCE EXAGÉRÉE, IDÉE DE RÉFÉRENCE, AUTRES IDÉES PARANOÏDES)	**(2, 1, 0)**	**(2, 1, 0)**

Expériences psychotiques (en tout temps avant le TCC (pré) ou depuis (post))

2 = délire ou hallucinations véritables
1 = « quasi » délire ou hallucinations
0 = aucun délire ou hallucination

42. Avez-vous déjà cru que certaines pensées avaient été mises dans votre tête par des forces extérieures?	(2, 1, 0)	(2, 1, 0)
43. Avez-vous déjà cru que certaines pensées avaient été ôtées de votre tête? (vol de la pensée)	(2, 1, 0)	(2, 1, 0)
44. Avez-vous déjà cru que vos pensées étaient diffusées tout haut, de sorte que le monde pouvait entendre tout ce que vous pensiez?	(2, 1, 0)	(2, 1, 0)
45. Avez-vous déjà cru que vos pensées, vos actions ou vos sentiments étaient contrôlés par une autre personne ou bien par une machine? (délire de passivité)	(2, 1, 0)	(2, 1, 0)
46. Avez-vous déjà cru que vous pouviez réellement entendre ce que les autres pensaient? Ou bien que les gens pouvaient lire dans votre tête comme si c'était un livre ouvert? (délire de devinement de la pensée)	(2, 1, 0)	(2, 1, 0)
47. Avez-vous déjà cru que quelqu'un conspirait contre vous ou que quelqu'un faisait exprès pour essayer de vous faire du mal ou de vous punir? (délire de persécution)	(2, 1, 0)	(2, 1, 0)

48. Avez-vous déjà eu l'impression que des gens vous espionnaient ou vous suivaient? Ou que les choses étaient spécialement arrangées pour vous? Ou que la radio ou la télévision vous envoyaient des messages spéciaux? (délire d'interprétation)	(2, 1, 0)	(2, 1, 0)
49. Avez-vous déjà eu l'impression que vous aviez commis quelque chose de terrible pour lequel vous auriez du être puni? (délire de culpabilité) (différent de sentiment de culpabilité)	(2, 1, 0)	(2, 1, 0)
50. Avez-vous déjà senti que vous étiez une personne extrêmement importante? Ou que vous aviez des pouvoirs ou des habiletés exceptionnels? (délire de grandeur)	(2, 1, 0)	(2, 1, 0)
51. Avez-vous l'impression que quelque chose de terrible c'est produit ou va arriver dans le futur (ex. : que votre corps va se dissoudre, que la fin du monde arrive) (délire de négation)	(2, 1, 0)	(2, 1, 0)
52. Avez-vous déjà cru que quelque chose n'allait pas avec votre corps ou que vous aviez une maladie grave? (délire somatique, sentiment de transformation corporelle)	(2, 1, 0)	(2, 1, 0)
53. Avez-vous eu d'autres pensées que les gens trouvaient vraiment bizarres, étranges ou fausses? (autres délires)	(2, 1, 0)	(2, 1, 0)
54. Avez-vous déjà entendu des sons ou des voix que les gens autour de vous n'entendaient pas? (hallucinations auditives)	(2, 1, 0)	(2, 1, 0)
55. Avez-vous déjà eu des visions ou vu des choses que les autres autour de vous ne voyaient pas? Etiez-vous réveillé à ce moment là? (hallucinations visuelles)	(2, 1, 0)	(2, 1, 0)
56. Avez-vous déjà eu d'autres expériences sensorielles bizarres? Comme sentir des odeurs que les autres autour de vous ne pouvaient pas sentir? Sentir quelque chose ramper sur votre corps qui n'était pas réellement là? (autres hallucinations)	(2, 1, 0)	(2, 1, 0)

57. S.8. LE PATIENT A EU DES « QUASI » DÉLIRES OU DES HALLUCINATIONS DE FAÇON RÉPÉTÉE	**(2, 1, 0)**	**(2, 1, 0)**

Items variés

58. Est-ce que ces expériences ont eu lieu sous l'influence de la boisson ou de la drogue? (Expériences psychotiques indues par des substances) 2 : exp. véritable; 1 : quasi exp.; 0 : aucune	(2, 1, 0)	(2, 1, 0)
59. Vous a t-on déjà dit que ce que vous disiez était vague ou bien trop élaboré, que vous mettiez trop de détails, que vous oubliez des parties importantes, que vous passiez souvent d'un sujet à l'autre? A DÉTERMINER DURANT L'ENTREVUE (discours étrange)	(2, 1, 0)	(2, 1, 0)
60. Vous a t-on déjà dit que c'était très difficile de comprendre ce que vous essayez de dire? Que ce que vous disiez n'avait aucun bon sens? ? A DÉTERMINER DURANT L'ENTREVUE (discours psychotique)	(2, 1, 0)	(2, 1, 0)
61. Avez-vous déjà eu des périodes durant lesquelles vous vous sentiez tellement bien ou plein d'énergie que durant quelques jours vous aviez arrêté de dormir et ce, sans vous sentir fatigué? Durant ces périodes est-ce que vos pensées se bousculaient dans votre tête? Est-ce que vous parliez beaucoup plus que d'habitude, tellement que les gens avaient de la difficulté à placer un mot. Est-ce que cela vous a mis dans le trouble? Est-ce que vous aviez des pensées étranges ou bizarres? Est-ce que des gens vous ont dit que vous étiez surexcité? (épisodes de manie) (on cote quand même si pas euphorie)	(2, 1, 0)	(2, 1, 0)

Échelle : cognition	**Score total (0-6) :**	**Score total (0-6) :**

Score de la section :
2 si le score est de 4 ou plus
1 si le score est de 2 ou de 3
0 si le score est de un ou moins ou si le patient a eu des épisodes intenses de manie ou épisodes psychotiques prolongés

	Score section (0-2) :	**Score section (0-2) :**

SECTION : actions impulsives

Si un oui est obtenu à l'une des questions suivantes, déterminez le nombre de fois que le comportement s'est produit. A l'exception d'où c'est inscrit, déterminer le score pour chaque type d'impulsivité de la façon suivante :
2 = 5 fois ou plus 1 = 3 à 4 fois 0 = 2 fois ou moins

Abus de substances

64. Est-ce qu'il y a déjà eu une période dans votre vie où vous buviez trop? (abus d'alcool) (2 : chronique; 1 : épisodique; 0 : aucun)	(2, 1, 0)	(2, 1, 0)
65. Avez-vous déjà pris des drogues pour être « high » (soit des médicaments ou des drogues qui se vendent dans la rue). Est-ce qu'il y a déjà eu un médicament prescrit dont vous étiez incapable de vous passer? (abus de drogues) (2 : chronique; 1 : épisodique; 0 : aucun)	(2, 1, 0)	(2, 1, 0)
66. S.9. LE PATIENT PRÉSENTE UN PROBLÈME SÉRIEUX D'ABUS DE SUBSTANCE	**(2, 1, 0)**	**(2, 1, 0)**

Déviance sexuelle

67. Avez-vous déjà eu des relations sexuelles avec un autre homme (femme)? (homosexualité)	(2, 1, 0)	(2, 1, 0)
68. Avez-vous déjà eu des relations sexuelles de façon impulsive ou des aventures d'un soir? (promiscuité, activités sexuelles débridées)	(2, 1, 0)	(2, 1, 0)
69. Avez-vous déjà eu des relations sexuelles inhabituelles (ex. : apprécier d'être humilié ou blessé, préférer regarder d'autres personnes faire l'amour que d'avoir vous-même une relation sexuelle (paraphilie)	(2, 1, 0)	(2, 1, 0)
70. Avez-vous déjà eu des relations sexuelles avec l'un des membres de votre famille, autres que votre mari/femme? (inceste initié et non pas subi)	(2, 1, 0)	(2, 1, 0)
71. S.10. LE PATIENT A DES HABITUDES DE DÉVIANCES SEXUELLES (I.E. HOMOSEXUALITÉ, PROMISCUITÉ, PARAPHILIE OU INCESTE)	**(2, 1, 0)**	**(2, 1, 0)**

Auto-mutilation

72. Avez-vous déjà volontairement essayé de vous blesser sans vouloir vous tuer? Comme par ex. vous couper, vous brûler, vous frapper? (auto-mutilation)	(2, 1, 0)	(2, 1, 0)
73. S.11. LE PATIENT A DES HABITUDES D'AUTO-MUTILATION PHYSIQUE	**(2, 1, 0)**	**(2, 1, 0)**

Tentatives de suicide

74. Avez-vous déjà menacé de vous tuer? (2 : 2 fois ou plus; 1 : 1 fois; 0 : jamais) (on ne cote pas si durant adolescence)	(2, 1, 0)	(2, 1, 0)
75. Avez-vous déjà fait une tentative suicidaire, même si mineure? (tentative/gestes suicidaires) (2 : 2 fois ou plus; 1 : 1 fois; 0 : jamais)	(2, 1, 0)	(2, 1, 0)
76. S.12. LE PATIENT A DÉJÀ FAIT DES MENACES OU DES GESTES OU DES ESSAIS MANIPULATEURS DE SUICIDE (I.E. POUR PROVOQUER UNE RÉPONSE DE SAUVETAGE)	**(2, 1, 0)**	**(2, 1, 0)**

Autres patrons de comportements impulsifs

Avez-vous fait des choses impulsivement qui auraient pu vous mettre dans le trouble comme...

77. avoir des épisodes où vous mangiez tellement que ça vous faisait très mal ou que vous deviez vous forcer à vomir?	(2, 1, 0)	(2, 1, 0)
78. dépenser trop d'argent sur des choses dont vous n'aviez pas besoin ou que vous ne pouviez pas vous permettre?	(2, 1, 0)	(2, 1, 0)
79. passer une période où vous gagiez sur tout même si vous perdiez de l'argent continuellement?	(2, 1, 0)	(2, 1, 0)

80. perdu votre contrôle et criez réellement après n'importe qui?	(2, 1, 0)	(2, 1, 0)
81. participiez à des batailles à coup de poing?	(2, 1, 0)	(2, 1, 0)
82. menacer de faire mal à quelqu'un, de le battre, de le tuer?	(2, 1, 0)	(2, 1, 0)
83. attaquer ou abuser de quelqu'un, le battre, lui donner un coup de pied?	(2, 1, 0)	(2, 1, 0)
84. volontairement briser des choses qui ne vous appartenaient pas (casser de la vaisselle, briser les membres, démolir la voiture de quelqu'un)	(2, 1, 0)	(2, 1, 0)
85. conduire beaucoup trop vite? (conduire en fou?) conduire en état d'ébriété ou gelé?	(2, 1, 0)	(2, 1, 0)
86. faire des choses contre la loi même si vous ne vous êtes pas fait prendre, comme faire du vol à l'étalage, vendre des drogues, commettre un vol par infraction (actions antisociales)	(2, 1, 0)	(2, 1, 0)
87. S.13. LE PATIENT A UN PATRON DE COMPORTEMENTS IMPULSIFS (Il faut quelques C ou 1 trop souvent)	**(2, 1, 0)**	**(2, 1, 0)**

Échelle : patron d'actions impulsives	**Score total (0-10) :**	**Score total (0-10) :**

Score de la section :
3 si le score est de 6 ou plus (il faut que S.11 ou S.12 = 2)
2 si le score est de 4 ou de 5 ou toutes autres combinaisons de 6 ou plus
0 si le score est de 3 ou moins

	Score section (0-3) :	**Score section (0-3) :**

SECTION : relations interpersonnelles

Intolérance envers la solitude

90. Généralement, détestez-vous passer des périodes de temps seul?	(2, 1, 0)	(2, 1, 0)
91. Faites-vous souvent des efforts frénétiques afin d'éviter de vous sentir seul? (parler au téléphone durant des heures, aller dans les bars pour parler à quelqu'un? (efforts pour éviter d'être seul)	(2, 1, 0)	(2, 1, 0)
92. Est-ce que ça vous déprime beaucoup de rester seul?	(2, 1, 0)	(2, 1, 0)
93. Vous sentez-vous très anxieux, en colère, vide à l'intérieur, mauvais, lorsque vous êtes seul?	(2, 1, 0)	(2, 1, 0)
94. S.14. LE PATIENT ESSAIE HABITUELLEMENT D'ÉVITER D'ÊTRE SEUL ET SE SENT EXTRÊMEMENT DYSPHORIQUE LORSQUE SEUL	**(2, 1, 0)**	**(2, 1, 0)**

Soucis vis-à-vis : abandon/engouffrement/anéantissement

95. Vous inquiétez-vous souvent à l'idée d'être abandonné par ceux qui sont près de vous? (peur d'être abandonné)	(2, 1, 0)	(2, 1, 0)
96. Avez-vous souvent peur d'être étouffé ou de perdre votre identité lorsque vous vous approchez trop d'autres personnes? (peur d'être engouffré)	(2, 1, 0)	(2, 1, 0)
97. Avez-vous souvent peur que vous allez perdre tous vos moyens ou cesser d'exister si vous étiez abandonné par quelqu'un d'important pour vous? (peur d'être anéanti)	(2, 1, 0)	(2, 1, 0)

98. S.15. LE PATIENT A SOUVENT EXPRIMÉ DES PEURS D'ABANDON, D'ENGOUFFREMENT OU D'ANÉANTISSSEMENT	**(2, 1, 0)**	**(2, 1, 0)**

Contre-dépendance

99. Avez-vous déjà travaillé à un endroit où votre occupation principale était de vous occuper de personnes ou d'animaux? (travail où il prend soins des autres)	(2, 1, 0)	(2, 1, 0)
100. Est-ce que vous offrez constamment de l'aide à vos amis, votre parenté ou à vos collègues? (offrir de l'aide)	(2, 1, 0)	(2, 1, 0)
101. Est-ce que ça vous dérange beaucoup quand les gens essaient de vous aider ou de prendre soin de vous?	(2, 1, 0)	(2, 1, 0)
102. Habituellement est-ce que vous refusez de demander aux autres de l'aide ou du support quant vous avez l'impression que vous en avez vraiment besoin?	(2, 1, 0)	(2, 1, 0)
103. Avez-vous l'impression qu'il y a quelqu'un dans votre vie dont vous avez extrêmement besoin? Est-ce que votre capacité de fonctionner dépend de cette personne? Votre survie?	(2, 1, 0)	(2, 1, 0)
104. S.16. LE PATIENT RECHERCHE FORTEMENT UN MODE DE RELATION OU IL PREND SOIN DES AUTRES OU A DES CONFLITS IMPORTANTS RELIÉS À SES BESOINS DE DONNER ET DE RECEVOIR DE L'AIDE	**(2, 1, 0)**	**(2, 1, 0)**

Relations interpersonnelles instables

105. Y a t-il des personnes dans votre vie qui sont proche de vous? Combien : ____ Voyez-vous ces personnes souvent? _____ Quelle personne est le plus importante pour vous?_____ (2 : 4 ou plus; 1 : 2-3; 0 : 1 ou moins)	(2, 1, 0)	(2, 1, 0)

106. Est-ce que ces relations ont été troublées par beaucoup de désaccords intenses?	(2, 1, 0)	(2, 1, 0)
107. Est-ce que vous vous quittiez souvent puis reveniez ensemble? (séparation à répétition)	(2, 1, 0)	(2, 1, 0)
108. S.17. LE PATIENT A TENDANCE À VIVRE DES RELATIONS INTIMES QUI SONT INTENSES ET INSTABLES	**(2, 1, 0)**	**(2, 1, 0)**

Problèmes récurrents dans les relations intimes

109. Avez-vous tendance à être très dépendant des autres? D'avoir besoin de beaucoup d'aide et de support afin de fonctionner? Est-ce qu'on vous a déjà dit que vous étiez trop dépendant? (dépendance : si le patient a été de façon répétitive dépendant des autres)	(2, 1, 0)	(2, 1, 0)
110. Est-ce qu'il vous arrive souvent de laisser des personnes vous forcer à faire des choses que vous ne voulez pas faire ou vous traiter cruellement? Est-ce qu'on vous a déjà dit que vous laissez les gens vous victimiser ou abuser de vous? (masochisme : le patient a tendance à laisser les autres le forcer à faire des choses ou lui faire mal)	(2, 1, 0)	(2, 1, 0)
111. S.18. LE PATIENT A SOUVENT DES PROBLÈMES DE DÉPENDANCE OU DE MASOCHISME DANS SES RELATIONS INTIMES	**(2, 1, 0)**	**(2, 1, 0)**
112. Est-ce qu'il vous arrive souvent d'ignorer les bons côtés des gens et de ne voir que leurs mauvais côtés? (clivage) De penser que les gens sont incompétents, mauvais, ne valent pas grand chose? Vous a t-on déjà dit que vous étiez très critique des gens, que vous les dévaluer facilement (dévaluation)	(2, 1, 0)	(2, 1, 0)
113. Est-ce qu'il vous arrive souvent de faire faire aux gens des choses sans directement leur demander? Vous a t-on dit que vous étiez manipulateur? (manipulation)	(2, 1, 0)	(2, 1, 0)
114. Est-ce qu'il vous arrive souvent d'essayer de forcer les gens à faire des choses qu'ils ne veulent pas faire, ou de les traiter de façon cruelle? Vous a t-on déjà dit que vous étiez autoritaire ou mesquin (sadisme)	(2, 1, 0)	(2, 1, 0)

115. S.19. LE PATIENT A DES PROBLÈMES RÉCURRENTS DE DÉVALUATION, DE MANIPULATION OU DES PROBLÈMES DE SADISME DANS SES RELATIONS INTIMES	**(2, 1, 0)**	**(2, 1, 0)**
116. Est-ce qu'il vous arrive de demander aux gens des choses qu'ils ne peuvent vous donner ou qu'ils ne devraient pas vous donner? De demander beaucoup de leur temps ou de leur attention? Vous a t-on déjà dit que vous étiez une personne très revendicative, exigeante?	(2, 1, 0)	(2, 1, 0)
117. Est-ce qu'il vous arrive souvent d'agir comme si vous aviez le droit d'avoir un traitement spécial? Comme si les gens vous devaient des choses à cause de ce que vous avez vécu? Vous a t-on déjà dit que vous agissiez comme si vous aviez droit à des considérations ou à un traitement spécial?	(2, 1, 0)	(2, 1, 0)
118. S.20. LE PATIENT A TENDANCE À ÊTRE EXIGENANT OU A DES ATTENTES IRRÉALISTES (COMME SI LES CHOSES LUI ÉTAIENT DUES) DANS SES RELATIONS INTIMES	**(2, 1, 0)**	**(2, 1, 0)**

Relations difficiles avec les professionnels de la santé (en tout temps avant le TCC)

119. Avez-vous déjà été en thérapie individuelle? Combien de fois? (nombre de thérapies individuelles) (2 : 2 ou plus; 1 : 1; 0 : aucune	(2, 1, 0)	(2, 1, 0)
120. Combien de mois avez-vous été en thérapie? (temps passé en thérapie) (2 : 12 mois ou plus; 1 : 1-11 mois; 0 : aucun	(2, 1, 0)	(2, 1, 0)
121. Avez-vous l'impression que vous étiez pire durant ou après ces (cette) thérapie(s)? De quelle façon? (régression)	(2, 1, 0)	(2, 1, 0)
122. Avez-vous déjà été hospitalisé dans une institution psychiatrique? Combien de fois? (nombre d'hospitalisation en psychiatrie) (2 : 2 ou plus; 1 : 1; 0 : aucune	(2, 1, 0)	(2, 1, 0)
123. Combien de mois avez-vous été hospitalisé? (2 : 12 mois et plus; 1 : 1-11 mois; 0 : aucun)	(2, 1, 0)	(2, 1, 0)

124. Étiez-vous pire durant ou après ces (cette) hospitalisation(s)? De quelle façon? (en raison de l'attention)	(2, 1, 0)	(2, 1, 0)
125. S.21. LE PATIENT A NETTEMENT RÉGRESSÉ DURANT LE PROCESSUS D'UNE PSYCHOTHÉRAPIE OU D'UNE HOSPITALISATION EN PSYCHIATRIE	**(2, 1, 0)**	**(2, 1, 0)**
126. Avez-vous déjà été le centre d'un conflit entre le personnel lorsque vous étiez hospitalisé? (contre-transfert du personnel)	(2, 1, 0)	(2, 1, 0)
127. Est-ce qu'il vous est déjà arrivé qu'un thérapeute soit très fâché contre vous? Qu'il vous ait demandé de quitter le traitement? Ou qu'il soit beaucoup plus impliqué dans votre traitement que la plupart des thérapeutes? (qu'il vous appelait souvent pour savoir comment vous alliez, qu'il a souvent pris votre défense devant votre famille ou à la cour?) (Il s'agit de juger si le patient a déjà été le point de mire d'une réaction de contre-transfert de la part d'un thérapeute. Lorsque cela est possible, le dossier du patient ainsi que le rapport du thérapeute devrait être utilisés pour établir la présence d'un contre-transfert).	(2, 1, 0)	(2, 1, 0)
128. Avez-vous déjà eu une relation amicale, intime, ou amoureuse avec un membre du personnel hospitalier?	(2, 1, 0)	(2, 1, 0)
129. …avec un thérapeute?	(2, 1, 0)	(2, 1, 0)
130. S.22. LE PATIENT A ÉTÉ LE POINT DE MIRE D'UNE RÉACTION CONTRE-TRANSFÉRENTIELLE DANS UNE UNITÉ INTERNE OU DURANT UNE PSYCHOTHÉRAPIE OU A FORMÉ UNE RELATION SPÉCIALE AVEC UN PROFESSIONNEL DE LA SANTÉ MENTALE	**(2, 1, 0)**	**(2, 1, 0)**

Échelle : relations interpersonnelles	Score total (0-18) :	Score total (0-18) :

Score de la section :
3 si le score est de 9 ou plus
2 si le score est de 6 à 8
0 si le score est de 5 ou moins ou si le patient est socialement isolé et a une présentation sociale étrange durant l'entrevue

	Score section (0-3) :	Score section (0-3) :

CONCLUSIONS		
	Pré-TCC	Post-TCC
1. Score total échelle émotions (0-10)	( )	( )
Score DIB de la section (0-2)	( )	( )
2. Score total échelle cognitions (0-6)	( )	( )
Score DIB de la section (0-2)	( )	( )
3. Score total échelle impulsions (0-10)	( )	( )
Score DIB de la section (0-3)	( )	( )
4. Score total échelle relations (0-18)	( )	( )
Score DIB de la section (0-3)	( )	( )
SCORE TOTAL DU DIB-R	(/10)	(/10)

QUESTIONNAIRE SCID-II
Questions diagnostiques sur le Trouble de la personnalité limite
Version pour les proches des sujets traumatisés cranio-cérébraux
(Gagnon, J.R., 2001)

Date :
Sujet #:
Lien de parenté avec le sujet : Parent ___ Conjoint ___
Fratrie ___ Ami ___

Consigne

Les questions suivantes ont rapport au type de personne que votre ... (enfant, conjoint, ami) était en général avant son TCC et est en général depuis son TCC, c'est-à-dire, comment il ou elle s'est habituellement senti-e ou comporté-e au cours des 2-3 dernières années avant son TCC et aussi depuis son TCC (i.e. depuis au moins un an). Établir le score selon le choix de réponse suivant : a) un peu = 1; b) beaucoup = 2; ou c) pas du tout = 0. Score maximum = 30.

		PRÉ-TCC			POST-TCC		
1.	Est-il souvent devenu très agité quand il pensait qu'une personne chère allait le quitter?	peu	beaucoup	pas	peu	beaucoup	pas
2.	Ses relations avec les gens qui lui sont chers ont-elles beaucoup de hauts et de bas extrêmes?	peu	beaucoup	pas	peu	beaucoup	pas
3.	A t-il soudainement changé son sentiment de qui il était et où il allait?	peu	beaucoup	pas	peu	beaucoup	pas
4.	Son sentiment de qui il est change-t-il souvent de façon dramatique?	peu	beaucoup	pas	peu	beaucoup	pas
5.	Est-il différent avec différentes personnes ou dans des situations différentes, tellement qu'il ne sait parfois pas qui il est vraiment?	peu	beaucoup	pas	peu	beaucoup	pas
6.	Y'a-t-il eu beaucoup de changements soudains dans ses buts à long terme, projets de carrière, croyances religieuses, et ainsi de suite?	peu	beaucoup	pas	peu	beaucoup	pas
7.	A t-il souvent fait des choses impulsivement qui aurait pu lui être dommageable?	peu	beaucoup	pas	peu	beaucoup	pas
8.	A t-il essayé de se faire du mal ou de se tuer ou a t-il menacé de le faire?	peu	beaucoup	pas	peu	beaucoup	pas
9.	S'est-il déjà coupé, brûlé ou griffé délibérément?	peu	beaucoup	pas	peu	beaucoup	pas
10.	A t-il beaucoup de changements d'humeur soudains?	peu	beaucoup	pas	peu	beaucoup	pas
11.	Se sent-il souvent vide à l'intérieur?	peu	beaucoup	pas	peu	beaucoup	pas
12.	A t-il souvent des crises de rage ou devient-il si en colère qu'il perd le contrôle?	peu	beaucoup	pas	peu	beaucoup	pas

13.	Frappe t-il les gens ou lance t-il des objets quand il est en colère?	peu	beaucoup	pas	peu	beaucoup	pas
14.	Est-ce que même des petites choses le rendent très en colère?	peu	beaucoup	pas	peu	beaucoup	pas
15.	Lorsqu'il est exposé à beaucoup de stress, devient-il méfiant par rapport aux autres gens ou se sent-il particulièrement hébété ou désorienté?	peu	beaucoup	pas	peu	beaucoup	pas
	TOTAL	___	___	___	___	___	___

SOCIAL COGNITION AND OBJECT RELATIONS SCALE (SCORS): MANUAL FOR CODING TAT DATA

Drew Westen, Ph.D. and collaborators
University of Michigan
July, 1985
Revised April 1987, October 1988, May 1989, April 1990

SCORING RULES

Complexity of Representations of People

Principle: scale measures the extent to which the subject clearly differentiates the perspectives of self and others; sees the self and others as having stable, enduring, multidimensional dispositions; and sees the self and others as psychological beings with complex motives and subjective experience.

- **Level 1:** lack of clear differentiation between characters; boundary confusion; confusion of points of view.
- **Level 2:** characters separate but unidimensional; emphasis on momentary actions or physical descriptions of characters; fluid characterization.
- **Level 3:** characters described as having some, though relatively simple, enduring qualities; some elaboration of psychological processes or internal life; some sense of continuity over time of attitudes or simple dispositions.
- **Level 4:** characters recognized as having complex subjective states, enduring characteristics, or mixed emotions or attributes.
- **Level 5:** characters recognized as possessing enduring and momentary traits and states, complex motives or conflicts, or mixed feelings or attributes with complex subjective experience.

General scoring rules:

(1) Where the bulk of a story is clearly one level but some brief remark is two or more levels above or below, score the intermediate level. Otherwise, score highest level attained.

(2) Any intrusion of poor differentiation, boundary confusion, or confusion of characters' point of view "spoils" an otherwise high-level response and automatically brings the score to Level 1.

Level 1

Principle: at Level 1 the person does not see others as clearly differentiated or bounded, and/or does not differentiate his own thoughts and feelings from those of others.

1. Score for characters who are "twinning," i.e., seen as sharing the same situation, thoughts, or feelings, particularly if this seems highly unlikely. Characters represented in the picture may be described as an undifferentiated "they," with a single set of thoughts, feelings, or intentions, when this is unlikely. Do not score if shared experience seems reasonable in the context of the story and there are at least some unshared thoughts and feelings. Characters seen as in conflict may be described as sharing the same thoughts or worrying about one of the characters' plight; e.g., "they're both worried about her being alone." Emotions may be attributed to situations or to the story as a whole, or subject may not clearly differentiate whose emotion is whose. Score for unreferenced pronouns that are not corrected and do not appear simply to reflect grammatical errors; e.g., in a story about a mother and a son (with no father mentioned) arguing, the subject states in the midst of describing their argument that "they might feel helpless, that they don't know what to so to help their son" (where the first "they" clearly referred to mother and son, but the second is indeterminate). If main characters are described in an undifferentiated way, score Level 1 even if other, more peripheral characters are bounded. Score undifferentiated characters on Card 10 as Level 2 or 3, depending on complexity of subjectivity ascribed to them.

2. Score if one character represented in the card is seen as a thought in the mind of another, where lack of elaboration or the literal (as opposed to metaphorical) quality of the response suggests that this is not a playful, symbolic response but instead represents a failure to recognize the independence and basic separateness of characters.

3. Score for response that suggests a boundary confusion of the confusion of the physical and the psychological. For example, "For some reason I don't think the father is going to make it, because of the way the doctor looks – kind of fuzzy, not definite. When I think of things as clear or definite, I think of them as confident or sure. (is the doctor fuzzy about it, or is the picture fuzzy?) The picture is fuzzy." Or: "There's another really faded out impression in the corner of a woman sitting near his brain, so maybe she wants him to be with her and not with someone else."

4. Score for failure to define any character at all (e.g., "there's a violin in this picture, and it's going to be played").

Level 2

Principle: at Level 2 the person sees people as clearly bounded, separate form self and from each other, but lacks an elaborate sense of people's subjective states, motives, or enduring characteristics. The focus is largely on behaviors and momentary actions. People are seen as primarily unidimensional, existing in situations rather than across situations. Where people are understood as having enduring qualities, these are generally global, evaluative traits like "nice" or "mean."

1. Score for lack of complexity of characterization. Characters are minimally elaborated or unidimensional, with description of simple thoughts and feelings not going much beyond the tester's instructions to provide these details. Subject's emphasis may be on physical description of characters, with no elaboration of their internal lives. Any traits used to describe them are global, when even relatively complex-sounding traits seem to be affective rather than cognitively driven (i.e., based primarily on a univalent feeling of liking or disliking, as when a character who is described with seeming complexity is really nothing but a witch). Presence of salient affect-driven representations in a response spoils an otherwise higher-level response and leads to a score of Level 2. If there is a strong suspicion, but not certainty, that a seemingly complex representation is affect-driven, score Level 3.

2. Score for characters who seem to have a momentary existence, with no sense of continuity, enduring dispositions, of life history, except perhaps unelaborated recent history grafted on. For example, someone stole the money of two characters, and "I think they're gonna look for it, and before, they thought they sere stealing money." People may be defined in terms of momentary actions; e.g., "he saw a house and wanted to go in it, and it was real scary and he got scared when he went in the door so he ran out…" Score when the subject describes what the character does (i.e., behaviors) rather than describing traits or dispositions that give a picture of who the character <u>is</u>.

3. Score for fluidity of characterization, even where the character is complex; e.g., "she's either very asleep or she doesn't care either way that he's standing there or not." <u>Do not</u> score for fluidity when the character changes because the subject changes the story. Only score where the subject clearly does not seem to keep one relatively coherent representation of the character in mind while presenting the story. Score for affectively "split" representations of the same person at two different points in a story, even if the representations at each point are complex, when the subject cannot, or does not, see the need to integrate two opposing univalent descriptions. For example, score where a character is evil and later becomes totally good, without adequate explanation of the transformation. Split responses of this sort "spoil" an otherwise higher-level response.

4. Score for simple understanding of feeling-states and intentions. Judgments of feeling may involve simple reading off of facial expressions, with no elaboration of psychic life; e.g., "the one on top seems really calm, the other

seems to be frightened, or concentrating on one thing; the one by the tree seems to be concentrating only on her." Feelings may be described with terms such as "sick" or "tired," or with relatively simple and unelaborated emotion words: e.g., "she is very upset," "he is angry." If the subject imagines a character experiencing two emotions, she or he cannot see how to integrate them and thus offers the two emotions as alternative versions of the story.

Level 3

Principle: at level 3 the person makes inferences about subjective states in addition to focusing on behavior. Understanding of other people's psychological processes and subjective experience does not, however, delve far beneath the surface. The person has ideas or "theories" about others' enduring characteristics, but these intuitive theories are either unidimensional, overly general, or lacking in subtlety. There is little sense that people could do things "out of character" or experience psychological conflicts.

1. Score for minor elaboration of characters' mental lives, beyond description of simple feeling states or intentions, where characters remain stereotypic or not well developed.

2. Score for some minimal sense of trait continuity over time or some mention of enduring attitudes, where characters remain unidimensional; e.g., "this is a little boy who usually likes to play music." Do not score for continuity of actions when implications are not explicitly drawn about the character's disposition; e.g., "he normally does that," or, "he practices everyday." Do not score for statements like, "this is a boy who likes to play the violin," when these are essentially extensions of the current scene, unless specifically qualified by a statement implying a longer-term disposition (e.g., "this is a boy who has wanted to play the violin for many years").

3. Score where a character experiences one relatively simple emotion which is ascribed to multiple causes, at least one of which is described in terms of its subjective components (e.g., "she is upset because she is afraid he will die and also because she does not want to be alone").

4. Score for minor fluidity of characters where the coder has a clear sense after reading the story what the character is like.

5. Score for recognition of a difference between reality and appearance with respect to emotions; e.g., "he's acting like he hates the violin because he wants them to think he hates it so he can really surprise them when he plays the song."

6. Score where the subject provides a relatively rich or elaborate picture of the character which says little about the character's enduring personality or

mental life; in other words, provide for elaboration on the context of the person or the social roles he or she plays where there is minimal psychological description of the person (e.g., "this is an immigrant child in the 1920s"). Do not score for elaborate physical descriptions.

Level 4

Principle: at Level 4 the person has an appreciation for the complexity of the subjective states of others and has a multifaceted view of personality dispositions. Component parts of personality are not yet understood as aspects of an interacting system, in which enduring dispositions can come into conflict or be brought to bear in different ways in different situations. While the person recognizes the potential for disparities among actions, self-presentations, and internal states, he or she has minimal awareness of disparities between conscious and unconscious mental events.

1. Score for detailed elaboration of subjective states in the specific situation of the story. Where there is, in addition, more than a minimal sense of what the character is like in other situations or sense of enduring qualities, score Level 5.

2. Score for a sense of enduring qualities (other than simple traits or likes and dislikes) ascribed to a character without much elaboration of subjectivity.

3. Score where two global, relatively simple traits with opposite affective valence are ascribed to the same character (e.g., "she's nice but dumb").

4. Score for explicit recognition that characters have mental conflicts, when such conflicts are either unelaborated or elaborated only during inquiry and do not appear to have been central in shaping the action of the story. Score for detailed elaboration of characters' psychic lives when such elaboration has no relation to the character's current actions or to the plot; e.g., subject tells a story about a man rationally discussing a business deal with his father, and then proceeds in the inquiry to provide a detailed sketch of the character's long-standing fears of sexuality. Score for some sense of extended timeframe for a character's psychological predicament or dilemma.

5. Score where characters experience mixed emotions, where there is little sense of what the character is like outside of the particular situation.

6. Score for characters whose enduring personality dispositions are described with qualification; e.g., "she's sometimes quick to get angry, but not always."

7. Score for simple conflicting intentions (e.g., "he knew he should speak up on her behalf, but he couldn't do it himself").

Level 5

Principle: at Level 5 the person sees people in complex ways, making elaborate inferences about their mental states, motivations, points of view, and unconscious processes. People are seen as having conflicting feelings and dispositions, and as expressing different aspects of their personalities in different situations.

1. Score for characters whose subjective experience is elaborated and who are also either multidimensional or seen in the context of enduring and momentary traits and states (which need not be conflicting or discrepant). Do not score for ornate elaborations of a character's smooth momentary dilemma or experience in one dimension (e.g., lengthy description of a boy as a violin player without extended temporal dimension to his psychological attributes); score Level 4.

2. Score for explicit contrasts between the way the character is in the picture and the way s/he usually is, where the character's qualities are well developed.

3. Score for characters who are described as experiencing ambivalent feelings simultaneously, where there is some sense of what the character is like out of the particular situation.

4. Score for characters who have extremely complex motives or elaborated mental conflicts. Do not score for momentary situational conflicts between characters; e.g., "she wants him to stay, and he's considering it but will leave."

5. Score where characteristics or traits with opposite affective valence are ascribed to the same character, where at least one such trait is not global or is qualified (e.g., "she's nice but sometimes she doesn't think things out"; "she's smart, but she's thoughtless").

Affect-tone of Relationship Paradigms

Principle: scale measures effective quality of representations of people and relationships. It attempts to assess the extent to which the person expects from the wrld, and particularly form the world of people, profound malevolence or overwhelming pain, or views social interaction as basically benign and enriching.

- **Level 1:** unambiguously malevolent or overwhelmingly painful; grossly negligent caretakers or significant others.
- **Level 2:** predominantly hostile but not overwhelming; empty; profound disappointment or loneliness; negligence and indifference.
- **Level 3:** mixed representations, mildly negative tone.
- **Level 4:** mixed representations, neutral tone.
- **Level 5:** predominantly positive; sense of benign interdependence.

General scoring rules:

1. Consider transitional objects (pets, teddy-bears, etc.) as human objects;
2. Score primarily for affect-tone of relationship paradigms and only secondarily for optimism or pessimism of story. Fro example, if relationships are seen as eventuating in pain or disappointment, but the character adapts by finding a way to be content in isolation, score primarily for the experience of relationships as negative.
3. If subject describes characters as happy in the face of others' misfortunes, do not score up for mixed affects; score for unambiguously negatively-toned interpersonal schemata.
4. Gratuitous violence where not typically seen "spoils" an otherwise higher-level response, unless the affect-tone of relationships depicted clearly cannot be accurately scored as Level 1.

Level 1

Principle: at Level 1 the person views the social world as tremendously threatening and/or experiences life as overwhelmingly capricious and painful. People are seen as abandoning, abusing, or destroying others and oneself with no reason, other tan perhaps maliciousness or unconcern. People are often classified as victims and victimizers.

1. Score for unambiguously malevolent representations of people or interaction, or for grossly negligent caretakers or significant others. If character escapes malevolence through his own efforts of those of someone else, score Level 2. If the story is overwhelmingly about evil

and malevolence, and a savior theme is tacked on at the end and is not integral to the real action of the story, score Level 1.

2. Score for gratuitous violence or aggression where not common (e.g., Card 3BM, "she got beaten up"; or Card 4, "he's gonna slap her across the face"), or violence toward animals, unless focus is on succorance form someone who prevents the violence.

3. Do not score for ordinary malevolent responses to cards 15, 18GF, or 13MF; subject must add idiosyncratic malevolent elaboration to score Level 1 on these cards. If character is seen as hostile with minimal idiosyncratic elaboration, score Level 2.

4. Do not score fights between characters that reflect competition or masculine bravura, unless elaborated with idiosyncratic malevolence; e.g., do not score for fistfights on Card 4 unless idiosyncratically traumatic or malevolent; score Level 2.

Level 2

Principle: at Level 2 the person views the world, and particularly the world of people, as hostile, capricious, empty, or distant, but not overwhelming. The person may feel tremendously alone. People may be experienced as unpleasant or uncaring, but not primarily as threats to one's existence.

1. Score for predominantly hostile interactions which are not overwhelming. People may be seen as capricious, the world may be experienced as very threatening but without significant violence, or life may be seen as offering character/s a very unpleasant existence.

2. Score for sense of people as unempathic or as passing strangers (e.g., "in their own worlds"), where this is upsetting to the characters or subject. For example, "she's either very asleep or doesn't care either way that he's standing there or not – not paying him any attention at all. That could be what's upsetting him." People may be sen as pushing others into doing things, with minimal interaction or consideration on either part. If characters are bland and unelaborated but not bland and indifferent toward each other, score Level 3 or 4.

3. Score for profound loneliness or sense of aloneness. If the story manifests an overwhelming sense of loss or loneliness with only one small "bright spot," score Level 2.

4. Score for character running from someone, even with implication of running for life, where there is no elaboration of general malevolence.

5. Score for victimization, where victimization is seen as partly self-generated, not only the result of malevolent or impersonal forces.

6. Score for failed ministrations by well-intending others, or escape from malevolent forces.

7. Score for escape from a very unpleasant existence through one's own efforts, where there is no help form others and no clear sense of relatedness to others.

8. Score for implied compassion of one character for another.

9. Score for physical fights reflecting bravura or competitiveness.

10. Score for defensively positive stories, or for inability to produce a story where it is clear that the subject is warding off aggressive or highly unpleasant content. Score only where it is clear that the subject is disturbed by the material (e.g., "I'm not going to tell that story. Let's make this about two lovers"). Do not score for tacked-on happy endings when the subject seems undisturbed by the content, or appears amused or playful in providing a glib ending. If defensive affect-tone is strongly suspected but not clear, or the subject is more obsessional in his/her indecision about which affect-tone to choose, score Level 3.

Level 3

Principle: at Level 3 the person has a range of affectively charged object representations/person schemas and interpersonal expectancies, though these are not primarily positive. People are seen as capable of loving and being loved, of caring and being cared for, but on a balance social interaction is evaluated as mildly negative.

1. Score for mildly negative representations. Score for arguments between characters without malevolence.

2. Score for affectively mixed representations where the tone is largely negative or where a character was saved by another from an interpersonally-inflicted (though non-lethal) harm (e.g., an unfair accusation). Different characters may represent different affect-tones of the object world; e.g., a man is falsely accused of a crime but is saved by a wise lawyer. Any explicit sense of real compassion by a character brings the response at least to Level 3.

3. Score for character being comforted after a loss unless relatedness between living characters is clearly an afterthought tacked onto a story about overwhelming loneliness (in which case, score Level 2).

4. Score for escape from danger effected through the help of benevolent others, where the danger is not the result of malevolent or abusive forces (e.g., a boy is saved from death by a surgeon). Where escape from malevolence (i.e., real danger resulting from an intentional force) occurs with the help from others, score Level 2.

5. Score where no interaction between characters is depicted, and the affect-tone is consequently neutral (e.g., "the woman went into the room and saw the vase which the wind has knocked over. She picked it up and left.")

Level 4

Principle: at Level 4 the person has a range of affectively charged object representations/person schemas and interpersonal expectancies. People are seen as capable of loving and being loved, of caring and being cared for, but on balance social relations are evaluated as neutral or mixed.

1. Score for affectively mixed interactions where there is no real danger to characters. Characters may be in conflict, but the outcome of their conflicts of decisions is not calamitous (e.g., man and woman who love each other in conflict about whether he should go to war, and he eventually does so but returns unharmed).

2. Score if characters are somewhat bland and unelaborated but do not appear averse to relating to each other.

3. Score for minimal affect involved in the story, where the affect-tone is relatively neutral. If the affect-tone is neutral because no relationships are described at all, score Level 3.

4. Score for giving or sharing, where this seems more to be an expectation or social obligation than an act of good will, love, or generosity.

Level 5

Principle: at Level 5 the person has a range of affectively charged object representations/person schemas and interpersonal expectancies, but on balance relations with others are seen as positive. The person generally expects to like or enjoy other people, to be liked by them, and to be able to count on them with some consistency.

1. Score for predominantly positive characters and interactions. People may be seen as doing things for each other or responding to each others' wishes. Do not score if the story includes a loss of a significant other (scores Levels 1-3, or 4 in rare cases if loss is largely a backdrop to a story with positive affect-tone of relationships).

2. Score where there is a mix of affects with predominantly positive feeking tone.

3. Score for people being successful and happy in their endeavors.