Trastorno orgánico de personalidad: un diagnóstico desestimado en pacientes traumatizados de cráneo

Organic personality disorder: a dismissed diagnosis in patients with traumatic brain injury

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Resumen

Introducción: El trastorno orgánico de personalidad (TOP) post traumatismo encefalocraneano (TEC) suele desestimarse por ausencia evidenciable de lesiones cerebrales y alteración en psicometría habitual (WAIS). Objetivo: Estudio exploratorio de 9 casos de TOP post TEC. Pacientes y métodos: Se analizan 9 casos de TOP post TEC no diagnosticados previamente. Resultados: Los pacientes no presentaron alteraciones de neuroimágenes (TAC), aunque sí algunas pruebas psicométricas alteradas, y un cambio consistente y dramático en sus cogniciones, conductas y afectos, pero no recibieron diagnóstico de TOP. Discusión: los equipos médicos parecen considerar más la indemnidad de las neuroimágenes que la clínica o las pruebas neuropsicológicas, y tienden a desestimar el diagnóstico de TOP. Conclusión: El diagnóstico de TOP debe considerarse en casos de TEC leve cuando lo sugiera la clínica.

Palabras clave: accidente industrial, traumatismo encefalocraneano, trastorno mental orgánico, neuroimagen, entrevista

Abstract

Introduction: Organic Personality Disorder (OPD) post traumatic brain injury (TBI) is often dismissed due to lack of clear brain damage and alteration in usual psychometrics (WAIS). Objective: An exploratory study of 9 cases of post TBI OPD. Patients and methods: We analyzed 9 previously undiagnosed cases of post TBI OPD. Results: The patients had no neuroimaging abnormalities (TAC), but some altered psychometric tests, and consistent and dramatic changes in their cognitions, behaviors and emotions, but were not diagnosed with OPD. Discussion: medical teams seem to consider more the indemnity of neuroimaging than clinical evidence or neuropsychological testing, and tend to dismiss the diagnosis of TOP. Conclusion: The diagnosis of TOP should be considered in cases of mild TBI when they suggest the clinic.

Keywords: industrial accident, traumatic brain injuries, organic mental disorders, neuroimages, interviewing

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Introduction

In Chile, the law distinguishes between work-related accidents or diseases from those "common" (non work-related) (Ley N° 16744), with legal and financial consequences for the patient and for various pension agencies. Responsibility for qualifying the origin of such disease or accident lies with the Social Security Agency (SUSESO).

A difficult problem of origin appraising is the organic personality disorder (OPD). OPD accepts no easy definition (Quemada, Sánchez-Cubillo, & Muñoz-Céspedes, 2007; Godfrey, 2003). Diagnosis of OPD for the ICD-10 (Organización Mundial de la Salud, 1994) and the DSM-IV (American Psychiatric Association, 2002) requires a serious deterioration of pre-morbid functional level, with symptoms ranging from emotions, impulses, cholera or aggression crisis, apathy, suspicion and paranoid ideation, to alteration of complex cognitive processes that are part of the executive functions (Slachevsky, Peña, Pérez, Bravo, & Alegría, 2006; Elliot, 2003; Gouveia, Brucki, Malheiros, & Bueno, 2007; Levin & Hanten, 2005), so it has been called sometimes "disexecutive syndrome" (Gómez Beldarrain, n.d.) or also "frontal syndrome" (Quemada et al. 2007), but this suggests an anatomic location that does not correspond to the neural complexity (Slachevsky et al. 2005) which is the basis of the "executive" functions (Godefroy, 2003; Miller & Cohen, 2001; Murray, O’Doherty, & Schoenbaum, 2007). Brain injury of different locations frequently converge in the production of the syndrome (Franulic, Horta, Maturana, Scherpenisse, & Carbonell, 2000), which shows the distributed and parallel organization of these circuits (Gouveia et al. 2007). The OPD is also manifested as alterations of the "social brain" (Brüne & Brüne-Cohrs, 2006), particularly a dysfunction in the Theory of Mind (Henry, Phillips, Crawford, Ietswaart, & Summers, 2006).

Little has been discussed in the literature about OPD (Kim et al. 2007), and still lacks a more specific clinical definition (Quemada et al. 2007; OMS, 1994; APA, 2002; Miller & Cohen, 2001; Henry et al. 2006). However, surprisingly, early in the last century Bleuler (1916/1971) had already observed and defined "traumatic encephalosis" as a group of chronic sequelae of brain injury. Bleuler noted that the clinical manifestations are not directly related to the intensity of trauma, stressed that the clinical expression was varied, which may include a complete amnesic syndrome, but often there are events which appear as a mild organic psychosyndrome difficult to prove "analog to a pseudoneurasthenics pictures of general paresis or early dementia" (Bleuler, 1916/1971, p.304). Finally, Bleuler emphasized the organic transformation of character. Note that both the ICD-10 and DSM-IV definitions are broadly consistent with the observations of Bleuler.

The most common etiology of OPD is traumatic brain pathology (Caine & Lyness, 2000), or hypoxia in a tissue particularly sensitive to it (Peltonen, Kowakhuk, & Paterson, 2007) so that accidents can be an important cause. Dismissing diagnosis of OPD, despite causing significant disability (Levin & Hanten, 2005; Franulic et al. 2000; Maturana & Carbonell, 1998; Rebolloso, Horta, Carbonell, & Trucco, 2000), is probably due to the relative lack of correlation between trauma severity and intensity of clinical manifestations (Quemada et al. 2007; Slachevsky et al. 2006; Levin & Hanten, 2005), and the frequent absence of traumatic brain imaging alterations (Mujica, González, Larrain, Miller, & Castoldi, 2003; van der Naalt, Hew, van Zomeren, Sluiter, & Minderhoud, 1999; Ortiz, 2006; Levin, Williams, Eisenberg, High, & Guiño, 1992). However, lack of diagnosis may have negative consequences for the patient because s/he is prevented of access to medical benefits, rehabilitation and financial support that is entitled to, and affects a pejorative attitude to him/her assuming that his/her behavior is seeking an "illegitimate" monetary gain.

We present an exploratory work on nine cases of patients with an OPD dismissed diagnostic, notwithstanding very significant consequences in their daily lives. The purpose of this study is to show the characteristics of patients with OPD and, above all, the problems highlighted by the health teams to reach a diagnosis, particularly overconfidence in diagnostic neuromaging and least confidence in history and mental examination.

Patients and method

We considered patients admitted to the Medical Department of SUSESO for qualifying the origin (work-related or not) of their disease between 2006 and 2011, concluding that these patients had an OPD originated in a work accident, although this diagnosis had been previously dismissed. We had full access to both images and neuropsychological studies, and to the entire clinical record, which meant access to a chronology of the behaviors, opinions, and missing records made by various professionals (doctors, nurses, psychologists, physiotherapists) who treated these patients, which provided rich material for clinical and problems appraisal faced by the health teams when dealing with cases in both diagnosis and clinical management.

Patients and one of their relatives (usually the spouse) were personally interviewed. Patients were also evaluated with the Folstein Mini-mental test (MMT), the Frontal Assessment Battery (FAB) and the Trail Making Test (TMT) (both parts), whose numerical results were contrasted with those of the validation work of these tests previously done in Chile (Quezada, Albala, & Klassen, 2004; Alegría, 2005).

Results

A total of 9 male patients were detected with a syndrome compatible with the OPD that were not previously diagnosed. The ages of patients at the time of the accident ranged from 22 to 57 years. Seven patients had a mild TBI, with brief unconsciousness and in 5 of them it was recorded a Glasgow Coma Scale (GCS) of 15 on admission. One patient had a serious TBI and another had a hypoxia-induced unconsciousness by crushing of the thorax.

Computed tomography (CT) scan was normal in 7 cases, including a CT scan with extradural hematoma without brain involvement. In two cases CT was not performed. The control images taken at different times of evolution were normal, except in one case an EEG mapping confirmed a frontal lobe alteration but this was practiced after the diagnosis of OPD was made, another case with an MRI with signs of diffuse axonal injury, and a third case with frontal and anterior cingulate SPECT abnormalities.

In most cases various psychometrics, particularly WAIS and Folstein MMT were practiced, and in two cases these psychometrics had signs of brain damage. The time elapsed between the accident and diagnosis of OPD ranged from 1 year...
2 months to 12 years. The results are summarized in Table 1. Further details may be required from the authors.

Below are included four clinical vignettes as paradigmatic cases of what happened to most patients.

**Case 2.** Male 57, 2nd medium school, truck driver, healthy. Simple TBI, fleeting unconsciousness, no GCS recorded. Normal brain CT. Irritable, aggressive, smashes a TV apparatus; hospitalized for agitation; suicidal ideation; permanent sadness; barely expressive; his wife has to bathe him; social isolation, without initiative, indifferent to the environment, not working at home, bizarre behavior. MRI, CT brain and a video EEG 6 month later are normal. Wife concerned about lack of control. Structural brain abnormality discarded. Discharged 7 months after the accident.

Admitted to SUSESO 23 months after the accident; lucid, not oriented in time, intense psychomotor slowness, low verbal fluency, cooperative. Does not understand meaning of prov-

<table>
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psychometrics. Discharged with normal EEG and a diagnosis of "factitious disorder".

Admitted to SUSESO 12 years after the accident. Pauclity of gestures and lexical expression; utterances with incomplete words; need to constant repeating him the questions. He does not understand proverbs. Concrete reasoning. Folstein MMT (25/30). Oriented; memory and calculation difficulty. FAB (6/18). Low lexical fluency, unable of making motor series; sensitive to interference; does not inhibit responses and has doubts about grasping. TMT A: 120 " TMT B, he gives up at 180 ". Interview with his wife. "A big change" has occurred since the accident. "Detached"; "he takes time to think and search for words"; he has trouble reading; invents answers; is unable to manage money. Does not remember what has saw on TV. "Nonsense" restlessness; impulsive; aggressive, apathetic, "nothing affects him." Does not remember what has saw on TV. "Nonsense" restlessness; impulsive; aggressive, apathetic, "nothing affects him." He neither takes initiative, nor cooperates, nor has an opinion; does not integrate into conversations. Ravenous, "eats everything without caring for others." Never takes a bath and urinates anywhere, even in public. She has heard him he "wants to kill himself."

Case 7. Male, 57, 3rd medium school, crane operator. Closed TBI, unconsciousness for 25', GCS 15, several normal CT. Multiple medical consultations due "atypical" behavior, difficult to evaluate by "bizarre symptoms, oscillating behavior and likely profit-seeking." Folstein MMT 2 months after accident shows "mild mental retardation," WAIS impairment of 25% "no significant for pathological deterioration." MRI compatible with diffuse axonal injury grade I but it is concluded anyway that it is a "cognitive pseudo-impairment" with "profit-seeking pretense behavior." Admitted to SUSESO 18 months after accident, lucid, partially oriented, fluent language, paraphasias, spontaneous writing almost impossible, stuck on details, frank inability to differentiate nuclear from the accessory. Folstein MMT 12/30, fails on all scales; FAB 5/18, fails on almost all scales, TMT A and B full of errors that can not correct. Interview with his wife. The wife reports that since the accident he is "other person", "changed from night to morning." Repetitive behavior, impulsivity, ignores others, devours common food on the table, without sexual activity, unmotivated, indifferent, without initiative, incapable of following instructions.

Case 8. Male, 35 years, 2 nd year medium school, bus driver, healthy. Trapped under the bus while repairing a fault, he suffers mechanical restriction of pulmonary ventilation, out-of-body experience, probably unconsciousness. He "rejects" the buses, complains of lack of concentration, poor memory, discouragement, remains bedridden, with suicidal thoughts, nightmares, does not understand the TV. SPECT (3 months later) shows increased frontal perfusion, anterior cingulate hypoperfusion. Rorschach (4 months later): borderline structure, "hides information". Diagnosis: PTSD, malingering, personality disorder. Admitted to SUSESO 12 months after the accident. Lucid, partial temporoparietal orientation, monotonous, low-volume speech. Folstein MMT: 23/30. FAB: 7/18. Low abstraction, low lexical fluency, unable to repeat motor series. Poor response to TMT. He does not understand proverbs. Interview with his wife. The wife reports that he was a "happy" person with a rich family, social, and sexual life, "well attached to the kids." Now is discouraged, "he finds meaning to nothing," impulsive, "comes and goes everywhere," violent, no sex life, indifferent to their children, "it's like talking to a cabinet." He does not understand the orders, does not finishes what he starts, gets lost in the street. Do not bathe, do not clean the stool, usually wear under soiled with excrement. Leave the stool in the toilet bowl. Expels gas in public. At least once urinated in the street in front of his house.

Discussion

When entering the Medical Department of SUSESO, the diagnosis of organic brain damage has not been considered to explain the neuropsychiatric impairment in any of these patients and their symptoms (affective, cognitive and behavioral) have been attributed to non-occupational disease (most often a personality disorder or factitious disorder).

According to the report mostly made by relatives, since the victim is rarely aware of the accident or delivers erratic information, patients have undergone a significant behavioral, affective and cognitive change and "have not gone on as before." From socially adapted person have turned apathetic, emotionally lazy, withdrawn, uninterested in the everyday, irritable and impulsive (to the point of assaulting family members and health staff), socially maladjusted, with various communication difficulties, unable to follow simple instructions and a progressive reliance on others in performing activities of daily life, even the most basic. Similarly, from the standpoint of labor performance, of being hard workers none has managed to regain their previous level and job stability. Some have made unsuccessful attempts to hope any work activity, but eventually they all end up unable to continue fulfilling their role of providers in their family system and as chronically unemployed.

Registers in medical records refer torpid and ungrateful evolution, with poor response to therapeutic measures, especially the use of psychotropics, antidepressants, antipsychotics and mood stabilizers, even in high doses and for prolonged periods. Comments in the medical records show that the relationship of these patients with the professionals in charge is contaminated by feelings of frank discomfort, omitting to record behavioral changes and, when done, are attributed to prior personality disorders or "manipulative" or "earn-seeking" attitudes, which includes family members who are supposedly "colluded" and therefore the functional impairment is considered of non occupational origin.

In most cases the neuroimaging study carried out showed no signs of brain damage, which is consistent with what is described in the literature in the sense that there is little correlation between the clinical-functional impairment and demonstrable harm through these procedures. However, in a case there were MRI lesions compatible with diffuse axonal injury grade I and in another case there was an alteration of SPECT frontal perfusion, but these evidences seem to have been dismissed. In another case an EEG mapping confirmed the prefrontal disorder, but it was performed only after diagnosis was done and served to confirm it.

Moreover, psychometric assessment of these patients ran different fate: either not performed or if performed, it was estimated that altered measures were not consequence of the accident.

On our part, psychometric tests were done as already detailed; the results are consistent with the background, with the clinical picture and evolution. At the same time detailed inter-
views were conducted with close relatives, which allowed us to consider the global picture as sequelae of the accident.

Conclusion

The OPD of traumatic origin can be a highly disabling condition. For this reason, it is of foremost importance that clinical teams attending patients who have suffered a cranial trauma or cerebral noxa do not dismiss the diagnosis and have it constantly in mind, even in those cases where the injury seems mild. It must be emphasized that, since in many cases imaging tests do not provide discriminative elements, should not be relied upon as an absolute sign of functional brain indemnity, especially when only a CT scan has been performed. Instead, there are anamnetic elements, in particular the history directed at family members revealing a distinct change in the patient, which allows suspecting the presence of OPD. Application of simple tests (MMT Folstein, FAB, TMT) can also be considered as collaborating with the diagnosis.

It has to be noted that disabling OPD of traumatic occupation origin warrants pension benefits and measures for the rehabilitation of the patient that he is deprived by rejecting the diagnosis.

Declaration of interest

The authors have no conflicting interests to declare.

References


