Neurobehavioral disorders are major debilitating sequelae after traumatic brain injury hindering family, work and social relationship. Care management of these symptoms at hospital, in medico-social facilities or at home faces the diversity and the low efficiency of usual treatments.

The French Physical and Rehabilitation Medicine Society (SOFMER) proposed to elaborate good practice recommendations under the aegis of the French High Health Authority (HAS).

On the basis of a systematic and critical review of the literature, performed by four project-managers, recommendations have been proposed by a working group composed of 23 experts.

A reading group will give his opinion before the final validation in the context of the on-going HAS label process.

http://dx.doi.org/10.1016/j.rehab.2013.07.109

CO14-002-e

**Challenging behaviour following traumatic brain injury: Symptoms and assessments**

A. Stefan e,*, J. Luauté b, J. Hamonet c, L. Wiart d, D. Plantier e, A. Arnould f, S. Aubert g, J.-M. Beis h, M.-C. Cazals i, J.-M. Destaillats j, E. Durand j, L. Blais k, F. Payol l, C. Fieyre m, L. Jagot n, C. Lermuzeaux o, N. Montrobert p, J.-M. Lucas q, D. Malauzat r, J. Preziosi s, A. Prouteau t, I. Richard u, L. Tell v

e CHU Nantes, service neurologie, 85, rue Saint-Jacques, 44093 Nantes, France

f CHU de Lyon, Lyon, France

g CHU de Limoges, Limoges, France

h CHU de Bordeaux, Bordeaux, France

i CHU de Lyon, hôpital René-Sabran, Lyon, France

j CHU Paris, AP–HP, hôpital-Raymond Poincaré, France

k Représentant des familles UNAFTC, France

l Institut régional de médecine physique et de réadaptation, centre de Lay-Saint-Christophe, France

m Représentant des familles UNAFTC, France

n Hôpitaux Saint-Maurice, Paris, France

o Maison du Douglas, ADEF résidences, Mercœur, France

p CH Esquirol, Limoges, France

q MDPH, Paris, France

r Université de Nantes, département de psychologie, France

s Institut Marcel-Rivière, La Verrière, France

t Centre médical de l’Argentière, Aveize, France

u Université de Nantes, Nantes, France

v MDPH, Paris, France

w Maison du Douglas, Mercœur, France

x Hôpital de Jonzac, France

y UNAFTC, France

z APHP, Garches, France

aa UGECAM, Nancy, France

bb Hôpitaux de Saint-Maurice, Paris

cc HCL, Giens, France

*Corresponding author.

E-mail address: angelique.stefan@chu-nantes.fr

**Keywords:** Traumatic brain injury; Behavioural disorder; Symptoms; Assessments; Recommendations

The aim of this work is to establish a scientific argumentation for the definition of behavioural disorders within a common framework, focusing on their incidence, prognosis factors, and assessment, in order to establish good practice recommendations.

**Method.** – A systematic review of the literature published between 1990 and 2012 was performed using the Medline database, targeting the epidemiological data concerning behavioural disorders (1) after a traumatic brain injury (TBI) as well as diagnostic processes and assessment tools (2).

**Results.** – Three hundred and ninety-nine articles were selected.

(1) The disorders can be classified as: positive features of primary behaviours (agitation 35–70%, aggression 25–39%, irritability 29–71%, alcohol abuse 7–26%, drug abuse 2–20%); negative features of primary behaviours (apathy 20–71%); sleep disorders (30–75%); affective disorders/anxiety/psychois (depression 12–76%, anxiety 0.8–24.5%, post-traumatic stress disorder 11–18%); obsessional compulsive disorder 1.2–30%, psychosis 0.7%); and suicide (1%).

Behavioural disorders after a TBI are two times more common than after an orthopaedic trauma without TBI.

(2) From this literature review, the experts suggest an assessment process of behavioural disorders (based on multiple sources, repeated assessment, integrating the evaluation of dangerousness and of associated cognitive and psychological disorders). The experts present the position of each assessment tool with respect to its specificity, validity, and translation into French. Only three behavioural scales (Neurobehavioural Rating Scale Revised, Behavioural Dysexecutive Syndrome Inventory, and European Head Injury Evaluation Chart) are specific to TBI and validated in French.

**Discussion.** – Recommendations by the French Haute Autorité de Santé will be developed from this literature review.

http://dx.doi.org/10.1016/j.rehab.2013.07.110

CO14-003-e

**Non-pharmacological treatment for behavioural troubles in brain injury patients. Review of literature**

L. Wiart e,*, J. Luauté h, C. Lermuzeaux e, L. Tell h, A. Stefan i, I. Richard j, A. Prouteau j, J. Preziosi k, J. Lucas l, E. Durand l, F. Payol l, D. Plantier m, L. Blais m

e CHU de Bordeaux, place Amélie-Rabat-Léon, 33071 Bordeaux, France

f CHU de Limoges, Limoges, France

g Institut Marcel-Rivière, La Verrière, France

h CHU de Nantes, France

i CH’ Angers, France

j Marseille, France

k CH de Limoges, Limoges, France

l Centre médical de l’Argentière, Aveize, France

m Université de Nantes, Nantes, France

n MDPH, Paris, France

o Maison du Douglas, Mercœur, France

p Hôpital de Jonzac, France

q UNAFTC, France

r APHP, Garches, France

s UGECAM, Nancy, France

t Hôpitaux de Saint-Maurice, Paris

u HCL, Giens, France

*Corresponding author.

E-mail address: lwia001@cegetel.rss.fr

**Keywords:** Brain injury; Behavioral troubles; Psychotherapy

Introduction. – Non pharmacological treatment is a major component to cure behavioral troubles of brain injury patients, unfortunately scientific literature remains poor about this theme.

**Method.** – Review of literature until 1980 on Medline by the documentation unit of the Haute Autorité de Santé (HAS). Other articles published in English or French referenced books were additionned. Classification in function of different psychotherapeutic cures and attribution of proof level, approbated by the lecture group.

**Results.** – Four hundred and forty-one articles were notified and 81 were selected and classified by order of frequency in five types of therapy: cognitive behavioral (26), holistic (19), systemic (14), psychanalytic (ten), therapy with physical mediation (six). Finally only 12 studies were of proof level of 2, 46 of proof level of 4, and nine articles were reviews of literature. There is no study of level 1 and no work concerning certain classical approaches like hypnosis, relaxation or EMDR.

**Discussion and conclusion.** – Cognitive behavior therapy, systemic and holistic approaches are the most documented (level 2 to 4). Psychanalytic treatment and therapy with physical mediation are partially documented (level 4) and would need complementary studies. Some recommendations will be redacted from this analysis of literature by the HAS.

http://dx.doi.org/10.1016/j.rehab.2013.07.111