Support disorders after traumatic brain injury, guidelines: Medications


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Method.– The research carried out by equations HAS documentary service (Medline, 1990-2012) targeted all types of study about dopaminergic agents, antidepressants, beta blockers, anxiolytics, antipsychotics, mood stabilizers, hormonal agents. Method HAS site www.has-sante.fr.

Results.– Of 772 references, 113 were analyzed with gradation recommendations. There is insufficient evidence to develop standard treatment in the management of aggression, agitation, irritability, impulsivity, apathy, depression (...) after traumatic brain injury (TBI). There is however evidence to establish guidelines:

– blockers (propranolol) can reduce aggression (off-label prescribing);
– the use of antiepileptics suggests efficacy of carbamazepine, valproate or divalproex sodium for the treatment of agitation and aggression. First-line recommendation;
– lack of evidence of efficacy of neuroleptics on irritability, aggression or apathy. These products expose to higher risk of malignant syndrome after TBI, they could be deleterious to brain plasticity. Their prescription is conceived in an emergency or crisis (loxapine). The long-term use should be avoided unless previous psychiatric illness. In the absence of alternative, prefer an atypical antipsychotic;
– antidepressants are used to treat depression (on-label prescribing) according to the guidelines by ANAES, 2002. They can be effective indirectly agitation and aggression. The SRI may have a beneficial effect on brain plasticity;
– benzodiazepines can be used in crisis situations but should not be used long-term in treating agitation;
– improved apathy has been reported with amantadine 300 mg per day (off-label prescription).

Discussion.– The choice of treatment depends on the level of evidence, on individualized goals and is a matter of experience and prudence.

Further reading

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Behavioural disorders after traumatic brain injury: Which therapeutic strategies?


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The purpose is to define the best attitude facing critical situations generated by behavioural disorders following traumatic brain injury, especially agitation crisis and behaviours with medico-legal consequences.

Methods.– Systematic and critical review of the literature and expert opinion of the working group.

Results.– The management of agitation in the awakening phase requires in a first step to identify and to treat an organic aetiology (pain, infection, drug withdrawal…); to consider environmental issues (reduction of physical restraints, room fitting…); to assure good sleep cycle regulation. When the patient is dangerous for himself or others, short period of sedating, rapidly acting, medications may be needed such as benzodiazepines and antipsychotic agents. When a longer period of treatment is considered, the best evidence is provided for beta-blocker and anticonvulsants.

In medico-social facilities, a crisis should lead to a medical advice, a better information of the patient, his/her family and his/her caregivers regarding the local organization and facilities involved in the management of traumatic brain injury is of great importance. Caregivers and family distress must be evaluated throughout the care pathway and dedicated programs toward caregivers and families such as family therapy interventions should be proposed.

Regarding behaviours with medico-legal consequences, three judicial protection measures can be applied depending on the need, emergency: “sauvegarde de justice”, “tutelle”, “curatelle”.

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