Introduction:
Among TBI complications, agitation is a frequent behavioural problem. Agitation causes potential harm to patients and caregivers, interferes with treatments, leads to unnecessary chemical and physical restraints, increases hospital length of stay, delays rehabilitation, and impedes functional independence. Pharmacological treatments are often considered for agitation management following TBI. However, the benefit and safety of these agents in TBI patients as well as their differential effects and interactions are uncertain.

Methods:
The major databases and the grey literature were searched. We included all randomized controlled, quasi-experimental, and observational studies with control groups. The population of interest was all patients, including children and adults, who have suffered a TBI. Studies in which agitation was the presenting symptom or one of the presenting symptoms, studies where agitation was not the presenting symptom but was measured as an outcome variable and studies assessing the safety of these pharmacological interventions in TBI patients were included.

Results:
We identified 14 226 references with our search strategy. Two authors screened 12 899 after removal of duplicates. After searching the grey literature and secondary databases, a total of 170 potential articles were identified. Eleven studies in which agitation or an associated behavior was the presenting symptom, 11 studies where agitation was not the presenting symptom but was measured as an outcome variable, and 3 studies assessing the safety of these pharmacological interventions were identified. Overall, the quality of studies was weak. In studies directly addressing agitation, pindolol and propranolol may reduce assaults and agitation episodes. Amantadine and olanzapine may reduce aggression, whereas valproic acid may reduce agitated behavior.

Conclusion:
There is weak evidence to support the use of pharmacological agents for the management of agitation in TBI

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