Supplementary Material 5

Motor coordination and cognitive functions

Thalamus hemorrhage-induced CPSP not only causes different types of pain but also leads to motor coordination and cognitive dysfunction. Brain injury in the ventral basal complex region does not influence spatial learning (explicit memory) despite causing central CPSP and promoting conditioned place preference (implicit memory) or motor coordination and balance function, on the other hand.[18] Thalamic hemorrhage can result in motor and cognitive impairment, potentially affecting specific brain regions responsible for memory processing, both implicit (unconscious) and explicit (conscious) memory tasks. This observation also aligns with the hypothesis of the various brain regions involved in the multiple-memory system.[18] It is important to note that this information pertains to behavioral tests in an animal model. Additional investigation is required to comprehend the CPSP mechanisms and to explore new therapeutic strategies.