New Hypotheses on the Role of Microglias in Ischemic Stroke Secondary to Neurocysticercosis and a Comprehensive Review

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Abstract:

Background: Cysticercosis (Ct) is a preventable and eradicable zoonotic parasitic disease secondary to an infection caused by the larva form of pig tapeworm Taenia solium (Ts), which mainly seen in people living in developing countries. However, the number of carriers in developed countries increases gradually due to globalization and uncontrolled migration. In this study, we look for the role played by microglia (Mg) in the pathogenesis of intraparenchymal/subarachnoid neurocysticercosis (I-SNCC)/ischemic -reperfusion-injury (IRI). After reviewing this issue, we formulate some hypotheses regarding to the role of Mg in this process and deliver some novel therapeutic approaches for I-SNCC/IRI.

Method: We searched the medical literature comprehensively, looking for published medical subject heading (MeSH) terms like "neurocysticercosis"; "pathogenesis of neurocysticercosis"; "comorbidity in NCC"; OR "I-SNCC"; OR "IRI;" OR "NCC/IS;" OR "Treatment of I-SNCC/IRI;" OR "MPC;" OR "ischemic stroke" OR "subarachnoid neurocysticercosis" OR "racemose neurocysticercosis"

Results: All selected manuscripts were peer-reviewed, and we did not find publications related to Mga/I-SNCC/IRI.

Comments and concluding remarks: We hypothesized the role played by Mg on the pathogenesis of I-SNCC on the role of Mg during the colloid/nodular stage of INCC and racemose NCC and an associated ischemic stroke base on the well-known benefits of Mg polarization.

Keywords:

Cysticercosis, neurocysticercosis, microglia activation, apoptosis, pyroptosis, necroptosis, PANoptosis, PANoptosome, infectious vasculitis, ischemic stroke, vascular dementia, racemose neurocysticercosis, subarachnoid neurocysticercosis, extra parenchymal neurocysticercosis.