

Alternative Hypotheses on the Role of Oligodendrocytes in Neurocysticercosis: Comprehensive Review

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Abstract : Background Cysticercosis (Ct) is a preventable and eradicable zoonotic parasitic disease secondary to a cestode infection by the larva form of pig tapeworm *Taenia solium* (Ts), mainly seen in people living in developing countries. When the cysticercus is in the brain parenchymal, intraventricular system, subarachnoid space (SAS), cerebellum, brainstem, optic nerve, or spinal cord, then it has named neurocysticercosis (NCC), and the often-clinical manifestations are headache and epileptic seizures/epilepsy among other less frequent symptoms and signs. In this study, we look for a manuscript related to the role played by oligodendrocytes in the pathogenesis of NCC. We review this issue and formulate some hypotheses regarding its role and the role played in the pathogenesis of calcified NCC and epileptic seizures, and secondary epilepsy. Method: We searched the medical literature comprehensively, looking for published medical subject heading (MeSH) terms like "neurocysticercosis", "pathogenesis of neurocysticercosis", "comorbidity in NCC"; OR "oligodendrocytes"; OR "oligodendrocyte precursor cells(OPC/NG2)"; OR "epileptic seizures(ES)/Epilepsy(Ep)/NCC" OR "oligodendrocytes(OLG)/ES/Ep"; OR "calcified NCC/OLG"; OR "OLG Ca2+." Results: All selected manuscripts were peer-reviewed, and we did not find publications related to OLG/NCC.

Keywords : oligodendrocytes, neurocysticercosis, oligodendrocytes, oligodendrocyte precursor cell, KG2, calcified neurocysticercosis, cellular calcium influx.

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