World Academy of Science, Engineering and Technology
International Journal of Medical and Health Sciences
Vol:9, No:12, 2015

Syndrome of Irreversible Lithium-Effectuated Neurotoxicity: Case Report and Review of Literature

Authors : David J. Thomson, Joshua C. J. Chew

Abstract : Background: Syndrome of Irreversible Lithium-Effectuated Neurotoxicity (SILENT) is a rare complication of lithium toxicity that typically causes irreversible cerebellar dysfunction. These patients may require hemodialysis and extensive supports in the intensive care. Methods: A review was performed on the available literature of SILENT with a focus on current pathophysiological hypotheses and advances in treatment. Articles were restricted to the English language. Results: Although the exact mechanism is unclear, CNS demyelination, especially in the cerebellum, was seen on the brain biopsies of a proportion of patients. There is no definitive management of SILENT but instead current management is focused on primary and tertiary prevention – detection of those at risk, and rehabilitation post onset of neurological deficits. Conclusions: This review draws conclusions from a limited amount of available literature, most of which are isolated case reports. Greater awareness of SILENT and further investigation into the risk factors and pathogenesis are required so this serious and irreversible syndrome may be avoided.

Keywords : lithium toxicity, pathogenesis, SILENT, syndrome of irreversible lithium-effectuated neurotoxicity
Conference Title : ICACCM 2015 : International Conference on Anesthesiology and Critical Care Medicine
Conference Location : Bangkok, Thailand
Conference Dates : December 17-18, 2015