

## ROLE OF HYPERTHERMIA IN NEUROLOGIC SEQUELAE OF THE NEUROLEPTICS-LITHIUM COMBINATION

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**Introduction:** The combination of lithium and neuroleptic is frequently used in the treatment of bipolar disorder. After a febrile episode, some patients exhibited neurological sequelae including cerebellar, pyramidal and extra-pyramidal signs. Lithium may be the main factor of neurotoxicity but hyperthermic states are probably involved in determining brain damage.

**Case description:** 58 year-old Tunisian woman with a medical history of bipolar disorder treated by combination of lithium carbonate (700 mg/day) and levomepromazine (50 mg/day), was presented to the hospital with complaint of fever, cough, walking instability, choreic and dystonic abnormal movements. Physical examination found a temperature of 39 C°, rhino-bronchial, cerebellar, pyramidal, and extra-pyramidal syndrome. The additional diagnostic tests such as brain scan, MRI brain and lumbar puncture were normal. Despite the corticoid treatment the cerebellar syndrome persisted.

**Discussion:** This case and some literature reviews illustrate the role of hyperthermic states in brain damage of the neuroleptics-lithium combination. Neuropathological findings showed selective degeneration of cerebellar purkinje cells. Research on this topic is recommended.