

Lithium Toxicity Precipitated by Fluvoxamine : a Case Report

T.T. Tan¹, M. Srinivasa Sastry MBBS MRCPsych²

¹Pharmacy, Institute of Mental Health, Singapore, Singapore ; ²General Psychiatry, Institute of Mental Health, Singapore, Singapore

OBJECTIVE : To report a case of Lithium toxicity resulting in haemodialysis, possibly caused by multiple drug interaction amongst Lithium, Enalapril and Fluvoxamine in a patient with Bipolar affective disorder with no history of renal disease.

CASE SUMMARY: A 56 year-old man with bipolar affective disorder was stabilized on Lithium 400mg BD for 3 months with concurrent Enalapril therapy. He, however, developed Lithium toxicity after fluvoxamine was added. He was admitted due to poor sleep and increased anxiety. Upon admission, Lithium level was normal (0.88mmol/L). Fluvoxamine, Propranolol and Lorazepam were added subsequently with no changes in Lithium dose. No deterioration in mental status was observed. However, on Day 10, he developed significant tremors and lethargy. Repeated laboratory findings revealed deranged Lithium level (2.3 mmol/L), serum sodium (128mmol/L), serum creatinine (407 mcmmol/L) and liver enzymes. Abnormal physical findings include hypotension and bradycardia. He was then admitted to the intensive care unit for close monitoring and underwent hemodialysis. Lithium was also discontinued. Subsequently, his Lithium level, renal function, and neurological signs improved.

DISCUSSION: The interaction between Enalapril with Lithium is well established. However, reported interactions between Lithium and Fluvoxamine are mainly cases of serotonin syndrome. An objective causality assessment using the Naranjo Probability Scale revealed a score of 7 – probable relationship between concomitant use of the drugs and the resulting symptoms.

CONCLUSION: This episode suggests that fluvoxamine- Lithium interaction may result in raised Lithium level. Clinicians should be aware of this severe adverse event and take steps to minimize its occurrence.