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NEUROTOXICITY FOLLOWING LITHIUM AND CARBAMAZEPINE INTERACTION – A CASE REPORT

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Lithium is now a widely used drug in psychiatry and is the most preferred agent in the prophylaxis of affective disorder. However, about 30-40% of patients do not respond to Lithium. Addition of carbamazepine may be helpful in such cases, where it acts synergistically with Lithium (Forrest 1982, Lipinski et al 1982, Desai et al 1983). We also tried this combination in a case of affective disorder was not responding to Lithium. The patient developed some neurotoxic features, hence the combination had to be withdrawn.

Case Report

Mrs. X, 25 yrs old, hindu, housewife was being treated for Manic-depressive psychosis, manic type (ICD-9) at the Psychiatry O. P. D. of R. G. Kar Medical College Hospital, Calcutta since 1981. She also had a family history of affective disorder and suffered five manic episodes in a span of three years. Her manic episodes lasted for about 10-20 days and always responded well to Haloperidol. The intervening period in between these episodes was uneventful. Considering her frequent relapses and remissions, she was started on Lithim therapy in January 1984. She was given 1000 mg. of Lithium carbonate per day in divided doses orally. Her serum Lithium level ranged from 0.8 to 1.0 mEq/L. Even then, she had two more attacks of acute manic excitement. After the last attack in Febraury 1985, carbamazepine was started in 600 mg/day in three divided doses along with Lithium carbonate. After 6 days of this combined therapy of Lithium carbonate and Carbamazepine the patient suddenly reported to O.P.D. with complaints of dizziness, uneasiness and tremulousness. A thorough physical and mental state examination was undertaken, which revealed mild confusion, gross tremors, unsteady gait, muscle twitchings, exaggerated deep tendon reflexes and ataxia. Her serum Lithium level showed 0.8 mEq/L (within the normal range). She was advised to stop carbamazepine and gradually her symptoms also subsided. After 1 week, she was advised to stop Lithium also. Carbamazepine alone was started after an interval of 3 days. There were no side-effects noticed even after 10 days of its commencement. Lithium was restarted along with Carbamazepine and interestingly the same undesired symptoms reappeared. Now, Lithium has been stopped and the patient is taking Carbamazepine alone and is being followed up.

Discussion

Treatment of affective disorder by combined Lithium and Carbamazepine therapy is still in its infancy, and the literature on this is very scarce. Lithium and Carbamazepine both can individually give rise to neurotoxic features, but in our case the neurotoxicity developed only when both the drugs

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were given together. Kanter et al (1984) described a case who developed delirium following this combined therapy. However, a single isolated case report is not sufficient to substantiate any conclusion. Hence, there is a need to evaluate this synergistic and efficacious combination.

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