



HYPERALCEMIA PREVALENCE IN BIPOLAR PATIENTS ON LITHIUM SALTS

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INTRODUCTION :

Lithium has been the molecule of choice for bipolar disorders for the past 100 years due to its thymoregulatory activity. Lithium salts bind to the calcium receptors on the parathyroid cells and reduce the negative effect of calcium on the gland's activity. Therefore, the importance of monitoring blood calcium levels in patients on long-term lithium therapy. In this study we will report the abnormalities of the blood calcium level in this population.

Methodology :

- Our retrospective study included a series of 59 patients managed at Razi Hospital for bipolar disorder, who were put on lithium and had their blood calcium levels monitored after the initiation of treatment. Blood calcium was determined by the direct complexometric colorimetric technique (Arsenazo III) using the proSELECTRA® automated system in the clinical biology department at Razi Hospital.
- The reference values are 2.15 to 2.57 mmol/L. The blood calcium level was interpreted according to the plasma protein level.

Results :

- ✓ the median age was 41.93 ranging from 12 to 67 years
- ✓ there was a male predominance : sex ratio (M/W) equal to 1.45.
- ✓ There were 11 cases of hypercalcemia, i.e. 18.64% of the cases, varying between 2.58 and 2.70 mmol/L. Seven patients were male.

- ✓ Lithemia was outside the therapeutic range in 3 cases.
- ✓ No parathyroid hormone determination was performed in these patients.

Tabel1: description of population according to distribution of calcemia levels

	Number of patients	Median age	Sex-ratio M/W	Correct lithemia (0.5-0.8mmol/L)	Lithemia outside of Therapeutic range
Normal-calcemia	29	41.89 (21-67 y.o)	1.9	11	18
Hypo- calcemia	19	40.94 (12-61 y.o)	0.72	8	11
Hyper-calcemia	11	43.72 (28-54 y.o)	2.66	5	6

Discussion and conclusion :

- Lithium has been used in clinical practice as an effective treatment for bipolar affective disorder.
- It is known to interfere with Parathormon metabolism at multiple levels. The first reported case of hypercalcemia following lithium treatment was in 1973 (1).
- Studies have shown that the incidence of hyperparathyroidism among patients on long-term lithium therapy is four- to six-fold higher compared to the general population (2)
- Bas A twig found that the prevalence of hypercalcemia was 15.6 % and he concluded that hypercalcemia in lithium-treated patients was significantly higher than that in non-lithium treated controls and correlated to the cumulative time lithium was used in this cross-sectional study (3).
- We recommend that serum calcium levels should be routinely tested in patients using lithium because of the importance of searching this side effect because it can be misleading given the psychiatric signs of the hypercalcemia itself.

References

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