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Lithium-induced Thyroid Dysfunction and the Duration of Lithium Treatment in Patients with Bipolar Disorder.

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Introduction.

Negative impact of long-term lithium treatment on kidney and thyroid functions makes the important problem of such therapy. While kidney functions deteriorate in time-dependent manner after ten years of lithium therapy it is unclear whether a significant association exists between thyroid dysfunction and duration of lithium administration.

Aims

The aim was to compare thyroid hormones and antibodies in bipolar patients receiving lithium for 10-19 years with those receiving for 20 years or more.

Methods.

The cross-sectional study was performed on 66 patients (21 male, 45 female) with bipolar mood disorder, receiving lithium for 10-44 (20±9) years. Thyroid stimulating hormone (TSH), free thyroxine (fT3) and free triiodothyronine (fT4) as well as thyroid peroxidase (TPO), thyroglobulin (TG) and TSH receptor (TSH-R) antibodies were measured.

Results.

Features of hypothyroidism were found in 10 (22%) female patients but not in male patients. A significant percentage of patients had abnormally high anti-TPO, and anti-TG antibodies (45% and 65%, respectively). There were no differences in thyroid function between 38 patients receiving lithium for 10-19 years and 28 patients taking the drug for 20 years or more.

Conclusions.

The results confirm greater susceptibility of female bipolar patients for lithium-induced hypothyroidism. High anti-TPO and anti-TG antibodies suggest a possibility of autoimmune disturbance in these subjects. However, in contrast to lithium effect on kidney function, our results do not show an association between duration of long-term lithium therapy and thyroid dysfunction.