

Lithium Associated Hyperthyroidism.

R. Nefzi¹, Y. Abid¹, S. Ouanes¹, I. Johnson¹, R. Ghachem¹

¹Department B, Razi Hospital, Tunis, Tunisia

Abstract

OBJECTIVES

Lithium is a drug which may cause thyroid dysfunction. The most widely known dysfunctions associated with long-term lithium treatment are goiter and hypothyroidism.

Lithium associated thyrotoxicosis is however uncommon.

This current review explores the common mechanisms of lithium induced hyperthyroidism.

METHODS

A systematic review of database was made using PubMed. The search keywords used were lithium therapy, thyroid side effects, thyroid dysfunction mechanism, hyperthyroidism, thyrotoxicosis.

RESULTS

Lithium induced hyperthyroidism is uncommon, the incidence rate varying from 0.1% to 1.7%.

The mechanisms of lithium associated hyperthyroidism are uncertain.

Recent studies have proved that high proportion of investigated patients experienced transient thyrotoxicosis and painless thyroiditis.

Different mechanisms have been discussed, including autoimmune inflammation, direct cellular destruction, susceptible individuals with preexisting Grave's disease, a rebound effect of lithium therapy interruption...

The pathogenesis of painless thyroiditis is unclear but different studies suggest a possible direct toxic effect of lithium on the thyroid gland.

Lithium stimulates thyroid autoimmunity: lithium treated patients presented more positive antithyroid peroxidase antibodies than not lithium treated patients. This could be explained by an increased activity of B-cell lymphocyte activity and reduced ratios of suppressor to cytotoxic T-cell lymphocyte.

CONCLUSION

Long term lithium treated patients should be monitored for the development of thyroid dysfunction. It's recommended to perform thyroid function test, thyroid antibodies and thyroid ultrasonography with a closer follow-up for lithium-treated patients with thyroid antibodies, or family history of thyroid disease.