

Abstract

Background: Lithium is known to cause thyroid dysfunction and most commonly subclinical hypothyroidism (SCH). Lithium-associated SCH is common, yet seldom investigated. It has significant impact on patient's neurocognitive function, course of psychiatric illness and development of other physical illnesses.

Objective: To determine the prevalence of Lithium-associated thyroid dysfunction and identify risk factors associated with development of SCH in patients taking Lithium.

Subjects: All Chinese patients taking Lithium at psychiatric outpatient clinic at Pamela Youde Nethersole Eastern Hospital (PYNEH) on 1st March 2014.

Methods: A retrospective cross-sectional study was conducted. Subjects who developed elevated thyroid stimulating hormone (TSH) were compared with those who remained euthyroid throughout Lithium treatment. Logistic regression and survival analysis were applied to analyze risk factors including demographic factors, clinical characteristics and characteristics of medications prescribed.

Results: The prevalence of Lithium-associated SCH was 31.7%. The significant risk factors associated with increased risk of its development included female, serum Lithium level, use of Valproate Sodium and use of antidepressants. Use of depot injection was associated with decreased risk of development.

Conclusion: The high rates of SCH while on Lithium might call for review of clinical guidelines on high risk patients' identification, thyroid function monitoring and choice of treatment when prescribing patients with Lithium. Consideration could be given to routine screening of thyroid antibodies before treatment to identify high risk cases. Early identification, close monitoring, consideration of depot, avoidance of concomitant use of Valproate or antidepressants could be considered before starting patients on Lithium treatment. Thyroxine replacement could be taken into account when Lithium-associated SCH was identified.