Lithium-associated primary hyperparathyroidism: An evaluation of screening and referral patterns in a southeastern Veteran population

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Brief Summary
Lithium-associated hyperparathyroidism is an under-recognized and under-diagnosed condition for which patients would benefit from standardized screening, surveillance, and referral to endocrine surgery.

Introduction
Long-term lithium therapy (Li-tx) has a well-established but under-recognized association with primary hyperparathyroidism (PHPT). Rates of hypercalcemia, screening for PHPT, and referral for parathyroidectomy (PTX) were evaluated among U.S. veterans on Li-tx.

Methods
Patients undergoing chronic Li-tx (>12 months) were identified from 1999-2022. Demographics, Li-tx duration, post-treatment calcium, parathyroid hormone (PTH), creatinine, and vitamin D levels were abstracted. Rates of screening for hypercalcemia (calcium ≥10.2mg/dL), PHPT (PTH ≥30pg/mL in setting of hypercalcemia), referral for PTX, and outcomes were evaluated.

Results
1356 patients underwent Li-tx, 514 of whom received chronic Li-tx. Baseline characteristic between those with and without post-treatment hypercalcemia. Of 148 patients on chronic Li-tx with post-treatment hypercalcemia, 112 (74.7%) underwent no further evaluation for PHPT, while 36 (25.3%) patients had a PTH level recorded. Although 33 (89.5%) hypercalcemic patients screened positive for PHPT, only 5 (13%) were referred for PTX. Of the four patients who underwent PTX, mean calcium was 11.2 mg/dL (range 11.1-11.4), and mean PTH was 272 pg/mL (range 108-622). Three patients localized on preoperative imaging, two of whom underwent unilateral exploration with cure, with one experiencing recurrence at 31 months. The remaining patient who localized preoperatively underwent bilateral exploration (BE), had 2 ipsilateral glands resected, and persistence. The patient who did not localize preoperatively underwent BE with 3 gland resection and cure.

Conclusions
Screening for PHPT and referral for PTX are underutilized in U.S. veterans undergoing chronic Li-tx. Institutional protocols to standardize screening, surveillance, and referrals to endocrinology/endocrine surgery could benefit this population at increased risk for PHPT.