

Evaluation of Causes of High Parathyroid Hormone Levels in Elderly

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Abstract

Primary hyperparathyroidism (PHPT) predominantly affects the elderly, with a peak incidence between ages 55 and 70. Parathyroid adenoma is the principal cause, representing 80-85% of all cases. The aim of the study to determine the frequency of parathyroid adenoma in elderly with high parathyroid hormone levels.

Subjects and Methods: We performed a retrospective analysis of 31 (30 female, 1 male) elderly with high parathyroid hormone levels. The demographic characteristics, biochemical tests and imaging features such as neck ultrasound and parathyroid scintigraphy were evaluated, retrospectively.

Results: The patients had a mean age of 67 ± 8.1 years, serum Ca of 10.9 ± 0.5 mg/dL, serum PTH of 110.6 ± 15.2 pg/mL, serum 25-hydroxy-vitamin D (25-OH D) of

22.9 ± 1.1 nmol/L. Two female patients (2/31) had a parathyroid adenoma shown on a sestamibi scan and neck ultrasound. The frequency of parathyroid adenoma was found to be 6.4%. These patients were underwent parathyroidectomy for primary hyperparathyroidism, 1 patient presented with severe abdominal pain diagnosed as parathyroid adenoma. Surgery was successful in all patients with no post-operative mortality. 12 patients had low serum 25-OH D (17.3 ± 3.9 nmol/L). Frequency of deficiency of vitamin D was 38.7%. And also, they treated with D vitamin and decreased their PTH levels. No cause was found related hyperparathyroidism with normal 25-OH D using imaging in the rest of them.

Conclusion: High PTH levels due to deficiency of D vitamin levels were higher than parathyroid adenoma in elderly.