Normocalcemic Primary Hyperparathyroidism: A Unique Presentation of Parathyroid Disease

Challenges in Diagnosis and Management

Background: Patients with normocalcemic primary hyperparathyroidism (PHPT) may present a clinical challenge as their serum calcium remains normal despite a concurrent parathyroid hormone (PTH) elevation. This case report discusses a 55-year-old woman with normocalcemic PHPT managed successfully with a parathyroidectomy.

Case Presentation

A 55-year-old woman presented to the hospital with unexplained bone pain and significant osteoporosis. She reported a history of osteoporosis starting at age 50. Her initial serum calcium was normal (9.6-10.2 mg/dL), and her intact PTH level was elevated at 112 pg/mL (12-88 pg/mL) with a lack of other causes for an elevated PTH.

Investigations

- Imaging: CT scan of the neck showed no parathyroid adenoma. Ultrasound, sestamibi scan, and 4D CT failed to localize the abnormal gland(s).
- Bone mineral density (BMD) and T-scores in the lumbar spine, hips, and femoral neck were abnormal, indicating severe osteoporosis at these locations.

Treatment

- Parathyroidectomy: After a successful parathyroidectomy, her serum calcium normalized (9.6-10.2 mg/dL) despite an elevated PTH level (92-116 pg/mL). X-ray absorptiometry (DXA) scan from 2015 showed normal bone mineral density (BMD) at the distal third of the forearm (BMD 0.450 g/cm², T-score -3.7), consistent with PTH-associated bone resorption. Following a 4-gland exploration with removal of 2 parathyroid microadenomas (63 and 100 mg), intra- and post-operative PTH levels normalized.

Conclusion

- Although many patients with normocalcemic PHPT may progress to develop hypercalcemia, some remain normocalcemic over an extended period. The successful management of this patient with a parathyroidectomy demonstrates the potential for successful treatment of normocalcemic PHPT.

Reference

- Malaiyandi et al., Mol Cell Endocrinol. 2018 478: 1-9.

Thyroid

SEX-SPECIFIC RISK GENE OF GRAVES’ DISEASE

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Results

- Men patients with Graves’ disease had a significant higher cumulative genetic risk than women. The differences were observed in men patients with Graves’ disease possessing a sex-specific GPR174 gene, whereby men patients with Graves’ disease possessed a significantly higher frequency of risk alleles than women.

Conclusion

- Our findings suggest one potential sex-specific link of Graves’ disease on the Xq21.1, which could increase our understanding of the pivotal mechanisms behind Graves’ disease and ultimately the provision of possible therapeutic targets.

Bone and Mineral Metabolism

PARATHYROID MICROADENOMAS AS A CAUSE OF NORMOCALCEMIC PRIMARY HYPERPARATHYROIDISM (PHPT) AND A SURGICAL CHALLENGE

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SAT-369

Background: Patients with normocalcemic primary hyperparathyroidism (PHPT) share similar risks of osteoporosis and nephro lithiasis with patients having hypercalcemic PHPT. The prevalence and natural history of normocalcemic PHPT is not well defined. Parathyroid microadenomas weighing < 100 mg may present as special clinical challenges in both the diagnosis and surgical resection.

Diabetes Mellitus and Glucose Metabolism

EUGLYCEMIC DIABETIC KETOACIDOSIS IN T1D: THE ERA OF SGLT-2 INHIBITORS AND KETO-DIET

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SAT-685

Introduction: Euglycemic diabetic ketoacidosis (DKA) is a challenging diagnosis since near normal blood sugar levels...