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Bone & Calcium

Mask parathyroid adenoma in morbid obese woman with secondary adrenal insufficiency

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Introduction: Primary hyperparathyroidism (PHPT) and metabolic syndrome (MS) are independently increase cardiovascular morbidities; however, this association is still controversial. The pathogenic mechanisms of MS among PHPT are not completely clear and the association with calcium metabolism is being studied, since calcium is pivotal for many metabolic processes. The association between these entities is complex and may be a source of additional morbidity and mortality. Objective is to highlight the mask features of parathyroid adenoma in morbid obese woman with secondary adrenal insufficiency. **Clinical case:** A 33-year-old female presented with discomforting polyarthralgia and weight gain for the last 2 years that was labelled as nonspecific arthritis and treated by multiple intra-articular injections of glucocorticoids. After a careful history and examination with baseline analysis, she was discovered to have MS (dysglycemia, high insulin resistance and hypertension). A feature glucocorticoid induced adrenal insufficiency was documented and work up for any evidence of osteoporosis was initiated. A high parathyroid hormone with hypercalcemia was documented and an established osteoporosis was evident. Furthermore, a large left side parathyroid adenoma was observed by a neck sonography and confirmed by a four-dimension computed tomography of the neck. Surgical exploration with excision of the parathyroid adenoma was performed, following which the patient recovered uneventfully.

The patient was initially managed as a case of MS with secondary adrenal insufficiency due to glucocorticoid misuse. Although not suspected initially, an extensive work up for osteoporosis screening and accidental hypercalcemia increase the chance of high index of suspicion for hyperparathyroidism. Further investigations then revealed the presence of a solitary parathyroid adenoma with coexistent hyperparathyroidism which was then managed surgically.

Conclusion: Despite the majority of PHPT is asymptomatic and over masked by MS, Active surveillance for any evidence of hypercalcemia and bone metabolism have to be judged carefully to reduce further morbidity and mortality.