Case Report

Parathyroid Adenoma: A Case Report

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Abstract:
A 39-year-old male attended in January 2020 with swelling in right lower neck and generalized weakness for 6 months. All the routine and biochemical tests were inconclusive except parathyroid hormone (PTH) which was very high. Patient undergone right sided parathyroidectomy. Histopathology revealed adenoma of parathyroid gland. He was fine till the last follow-up.

Keywords: Parathyroid adenoma, Parathyroidectomy, Primary hyperparathyroidism.

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Introduction:
Parathyroid adenoma (PTA) usually being smaller in size, are rare cases to be found weighing >3.5gm[1]. Excessively raised parathyroid hormone level indicates and present with the syndrome of primary hyperparathyroidism (PHPT).

Parathyroid hyperplasia or carcinoma can also be one of the reasons for primary hyperparathyroidism, but mostly of about 85% of cases are responsible due to PTA[2].

This case report describes the case of PTA which will be helpful to prevent misdiagnosis like any lymphadenopathies, thyroid nodules or carcinomas[3]. With a rare mortality rate this case report also verifies the published literature on PTA as well its proper diagnosis & treatment.

Case report:
A 39-year-old male came to us with the complaints of a neck swelling at right lower region. He also complained of fatigue. There was no history of weight loss, no family history, no tobacco/ alcohol consumption history.

He had no symptomatic history of any kidney stone but a year ago he was done CT-abdomen which revealed 3 mm calculus on the right kidney. He was not on any other medication.

On clinical examination, a swelling on the right lower neck was obvious on inspection, mobile, nodular feeling on palpation. Other systemic examinations were unremarkable. His vitals were normal.

On investigation, CBC and liver findings were normal. Serum creatinine was 1.03 mg/dl, 24-hour urine calcium was 4.30 mmol/L, Serum Calcium and vitamin D were slightly raised, but PTH was 2406 ng/L, which was significant. Later on, a neck USG was done and a 17x11x10 mm complex nodule was found separately beside the right lower pole of thyroid gland.

A USG guided FNAC was done but report was non-significant. Patient undergone right sided parathyroidectomy. Histopathology revealed parathyroid adenoma.

Discussion:
PTA's are the benign tumors (non-cancerous) of parathyroid gland that causes PHPT. It is an unusual disease that also does not have any specific causes except can be familiar or association with overexpression of cyclin D1 gene or radiation exposures[1,3].

Clinical picture of PTA resembles too much fatigue, worse memory and lack of concentration, depression, irritability, kidney stones, bone & joint pain, osteoporosis, abdominal pain.

In our case, he has a kidney stone. Sometimes in spite of having higher levels of calcium in blood for a number of years, patient is unable to tell about their symptoms.

In terms of physical exam, before reviewing the lab results, a swelling was palpated and then as for diagnostic purpose, serum calcium and PTH was sent and proceed for imaging.

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Hypercalcemia and elevated PTH are hallmarks of PHPT as also in our case, serum calcium was 12.5 mg/dl, PTH was 2406 ng/L which was very high.

Our patient was also undergone neck USG that too helped localizing the tumor though other literature and studies suggested to do CT scan to find the size, extension and relation to surrounding structures.

As the findings are obvious on palpation and USG, we did not do a CT scan, to reduce the financial burden of the patient.

Finally, for management purpose, the US national institutes of health guidelines for PTA management are followed as either medical or surgical if it fulfills criteria[4,5]. Our case was specific for surgical exploration and removal according to symptoms and diagnostic criteria.

So, we undertook parathyroidectomy which is the preferred procedure. After surgery, the specimen sent for histopathology and reveals non-cancerous.

On the follow-up visits of our patient, he was totally asymptomatic, normo-calcemic and without recurrence.

Conclusion:

Last but not the least though PTA are rare cases, proper identification through imaging, hypercalcemia and raised PTH levels with combination of presenting symptoms are required.

It is nothing to worry of if proper management or surgery can be done within due time. Our patient was doing good till the last check-up.

Conflict of interest:

The authors declare that there is no conflict of interests regarding the publication of this paper.

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