

Large Mediastinal Parathyroid Adenoma Presenting with Acute Pancreatitis

Sir,

We want to discuss a case scenario of 63-year-old female who was admitted with acute pain in abdomen in another hospital 1 week before she was referred to us. She was diagnosed with acute pancreatitis after thorough evaluation based on significantly elevated serum amylase and serum lipase and subsequent ultrasonography (USG) and computed tomography (CT) of abdomen. She was managed conservatively for same and recovered after 7 days. During the evaluation she was detected to have hypercalcemia (multiple reports between 11 and 13 mg/dl (normal range 8.8–10.8 mg/dl)) and subsequently was referred to us for evaluation of hypercalcemia. She also complained of anorexia and nausea from last 1 month. There was no history of any bony pains, low trauma fracture or renal calculi. Her biochemistry at our center confirmed hypercalcemia with serum calcium of 13.1 mg/dl and her serum intact parathyroid hormone (iPTH) level was 1104 pg/ml (normal 15–65 pg/ml) [Table 1]. A biochemical diagnosis of primary hyperparathyroidism (PHPT) was made. For localization of lesion, she underwent USG of neck, which did not show any abnormal parathyroid mass in the neck. Tc-99m sestamibi scan was done which showed large focus of increased tracer uptake in the mediastinum [Figure 1]. Also, CT trans-axial images reveal a soft tissue density lesion of $\sim 5.0 \times 2.5$ cm in retrosternal location, just anterior to ascending aorta (correlating with MIBI uptake area). A diagnosis of mediastinal parathyroid adenoma was considered. After discussion and consent with patient and family, she underwent video-assisted thoracoscopic surgery for parathyroidectomy. After surgery postoperatively, her serum calcium returned to normal (9.2 mg/dl) and there was significant drop in serum iPTH level (110 pg/ml). Histopathology confirmed parathyroid adenoma.

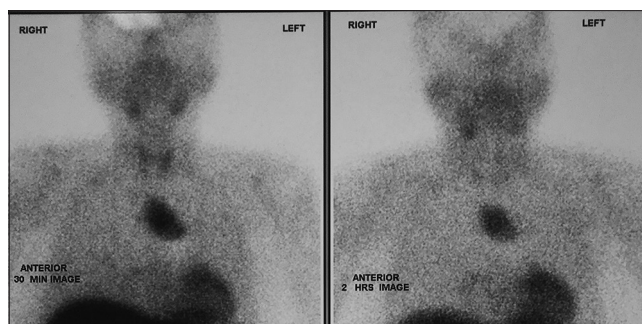


Figure 1: There is a large focus of increased tracer uptake in the mediastinum. Physiological uptake is seen in the myocardium, liver, thyroid and salivary glands. No other focus of increased MIBI uptake is seen

Table 1: Biochemical investigations of our patient

Parameter (Normal range)	Patient's value
Serum calcium (8.8-10.8 mg/dl)	13.1
Serum phosphorus (2.3-4.7 mg/dl)	2.1
Serum alkaline phosphatase (40-150 U/L)	310
Serum albumin (3.5-5.2 g/dl)	3.1
Serum intact parathyroid hormone level (15-65 pg/ml)	1104
Serum 25 (OH) vitamin D (30-100 ng/ml)	21
Serum creatinine (0.57-1.11 mg/dl)	0.71

Hypercalcemia is considered to be a rare cause of pancreatitis but the true cause and effect relationship between PHPT and pancreatitis remains controversial.^[1] The incidence of acute pancreatitis in patients with hyperparathyroidism was reported to be only 1.5% in western series.^[1] However, in a series of 218 patients published from India, pancreatitis was observed in 16% of PHPT patients; with $\sim 50\%$ of its being acute pancreatitis.^[2] A high/high normal serum calcium value in a patient

of pancreatitis should always draw suspicion and warrants further work up. In fact, many patients can rather present with normal or low serum calcium during the acute episode of pancreatitis and hypercalcemia rather become overt only once acute pancreatitis settle.^[3] In all patients with pancreatitis serum calcium should be checked especially after settlement of acute phase of pancreatitis and those with hypercalcemia should have further work up.

Ectopic mediastinal parathyroid adenoma presenting with pancreatitis is rare and after thorough review of literature, we could find only few such previous reports.^[1,3-5] In our case, patient presented with hypercalcemia during evaluation of pancreatitis and diagnosed to have PHPT with large mediastinal parathyroid adenoma. In fact, such large size mediastinal tumor should raise suspicion of parathyroid carcinoma as well, which was not revealed in histopathology in our case. Also, we have planned to keep this patient on regular follow-up.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Submitted: 29-Mar-2020

Revised: 30-Mar-2020

Accepted: 30-Mar-2020

Published: 30-Jun-2020

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Quick Response Code:



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DOI:

10.4103/ijem.IJEM_160_20

How to cite this article: Kumar A, Damle NA, Khandelwal D, Aggarwal V. Large mediastinal parathyroid adenoma presenting with acute pancreatitis. *Indian J Endocr Metab* 2020;24:288-9.

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