

Case Report

Importance of parathyroid hormone assessment in a known case of ulcerative colitis and recurrent pancreatitis

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ABSTRACT

Gastrointestinal diseases like acute pancreatitis, ulcerative colitis, peptic ulcer may be associated with hyperparathyroidism which may be primary or secondary. These conditions associated with parathyroid adenoma is rare in the literature globally. Here we present a 43 years old female patient who was treated for ulcerative colitis and probably drug induced pancreatitis as initial impression in other health care facility but without any relief. When consulted at our health facility, she was systematically and rationally investigated for hyperparathyroidism and was diagnosed to have parathyroid adenoma. She was operated and now reported to have relieved of her symptoms. This case report thus demonstrates importance of investigating patients of ulcerative colitis with pancreatitis for hyperparathyroidism.

Keywords: Case report, Hyperparathyroidism, Pancreatitis, Ulcerative colitis

INTRODUCTION

Hyperparathyroidism may be primary or secondary and there is increase in the levels of parathyroid hormones and calcium. In most cases, the diagnosis is incidental owing to routine health check-up, the people undergo. In certain admitted patients, it is diagnosed due to comprehensive evaluation. Some cases of hyperparathyroidism may present with symptoms like abdominal colic, bony pains, psychiatric manifestations, pathological fractures or nephrolithiasis.¹⁻³

It has been estimated that around 7% of cases of acute pancreatitis are due to hypercalcemia which is associated with hyperparathyroidism. In other words, hyperparathyroidism leads to elevated levels of calcium in the blood which in turn can damage pancreas leading to acute episode of pancreatitis.⁴⁻⁶ Having said that, however, in reality, it may be very rare. Hence, pancreatitis is usually not a common initial presentation of primary hyperparathyroidism. It is rare.⁷⁻⁹

Bidirectional relationship has been demonstrated over the years, though sometimes, between the gastrointestinal disorders/diseases like ulcerative colitis, pancreatitis, peptic ulcer and hyperparathyroidism. Present case also demonstrates importance of investigating patients of ulcerative colitis with recurrent attacks of pancreatitis for hyperparathyroidism.

CASE REPORT

A 42 years old female presented to the out-patient department of this health care facility with ulcerative colitis treated with mesalamine elsewhere. Later she developed pain abdomen and she was diagnosed with pancreatitis secondary to mesalamine. The drug was stopped. After stopping the drug, there was no relief, as she was getting recurrent attacks of Pancreatitis consulted at multiple places and diagnosed as autoimmune at a different health care facility without any improvement of her symptoms, consulted at our health care facility and we thoroughly investigated with Calcium and Parathyroid

hormone levels. Other causes of pancreatitis are ruled out at our healthcare facility by assessing IgG4, AnA and USG abdomen was negative for GB calculus or sludge. EUS was planned to rule out micro calculi of gall bladder but in view of elevated calcium and high PTH, we deferred the procedure keeping it as a main etiological cause for her recurrent episodes of pancreatitis.

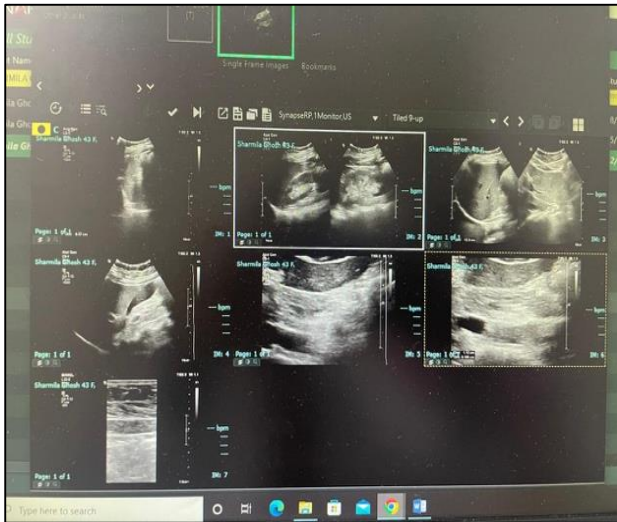


Figure 1: USG abdomen.



Figure 2: USG Neck.

She underwent thorough and comprehensive evaluation at our center. After thorough evaluation at the present hospital with emphasis on investigations related to parathyroid gland and parathyroid hormone which is very rare, the patient was found to be suffering from parathyroid adenoma as root cause. Thus, this case report emphasizes the importance of parathyroid evaluation in cases of recurrent pancreatitis with other co-morbidities. The case course has been outlined as follows.

The patient was admitted. At the time of admission, patient was afebrile, conscious, coherent, well oriented in

time and place, with blood pressure of 120/80 and respiratory rate of 20 per minute. On examination, cardiovascular system, S1, S2 present; respiratory system: bilateral air entry, per abdomen soft, tender. Patient was admitted with above mentioned history. All necessary investigations were done. Following was elevated: serum calcium (12.8), PTH (121), amylase (120), ALHPO4 (121), SGOT and SGPT (42 and 43), serum lipase (221). Vitamin D, HbA1c, creatinine and TSH were normal. MRCP showed mild exacerbation/resolving pancreatitis involving body and tail of pancreas with small peri-pancreatic suprarenal collection. No significant MPD dilatation. However, few areas of narrowing are possibly due to edematous pancreas. Mild hepatic fatty infiltration.

US abdomen (Figure 1) and pelvis showed grade 1 fatty changes in the liver, features of gall bladder cholesterosis. Ultrasound with color doppler showed coarse altered hepatic echotexture, changes of chronic pancreatitis, obstructive renal calculus.

In view of elevated calcium, parathyroid hormone elevation and evidence of renal calculi, to rule out primary hyperparathyroidism, we have got USG Neck (Figure 2) which showed (15-5-24) heteroechoic lesion adjacent to superior pole of right lobe of thyroid with necrotic component and cystic areas noted within. Color doppler shows increase in peripheral vascularity. Features suggest the possibility of parathyroid adenoma. Color doppler showed increase in vascularity. TIRADS-3 showed iso-hetero echoic nodule with areas of cystic components within seen in the superior pole of right lobe. Superior aspects of the lesion showed curvilinear calcifications.

Parathyroid scintigraphy and SPECT study (17-5-24) showed well defined, hypodense, oval shaped soft tissue density lesion superior to upper pole of right lobe of thyroid suggestive of right superior parathyroid adenoma. Colonoscopy report showed left sided colitis.

Sestambi scan showed right superior parathyroid adenoma with calcified nodule in right thyroid lobe. Previous colonoscopy (9-11-23) showed ulcerative colitis. CECT abdomen (9-11-23) showed chronic pancreatitis. Also, a cystic lesion in relation to left adrenal gland with tiny nodules in retroperitoneum on left side-pseudocyst-sequelae to pancreatitis. Dilated portal vein. Bilateral non-obstetric renal calculi.

After pre-operative optimization, patient underwent focused parathyroidectomy with right hemithyroidectomy under general anesthesia on 22-5-2024. Operative findings were as follows: nodule of 3×2 cm in right lobe of thyroid noted, right superior parathyroid adenoma of 2×2.5 cm noted, RLN visualized & preserved, right inferior parathyroid preserved. Intra-operative and post-operative period was uneventful. Soft diet was started on POD 1. Suction drain removed on

POD 2. Frozen section I: right hemithyroidectomy s/o follicular neoplasm. Frozen section II: s/o parathyroid adenoma. Preoperative PTH was 160 pg/ml which dropped down to 15 pg/ml after surgery.

Patient was asked to come for follow-up after one week. She was given Pancreatic enzyme supplements. Started on Ulcerative colitis treatment and was discharged, she had no further episodes of Pancreatitis attacks, at her review we tapered pancreatic enzyme supplements and stopped, continued her UC treatment.

Patient expressed overall five-star satisfaction for relief of her symptoms. Patient consent was taken regarding publication of data with confidentiality.

DISCUSSION

Present case thus highlights importance of investigating the patients with recurrent attacks of acute pancreatitis for hyperparathyroidism and if there is hypercalcemia, then detailed study of parathyroid gland should be carried out. Though rare, there are no chances of missing the diagnosis.

Similar case was also reported by Giovanni C et al, where they described a female patient of age 46 years with ulcerative colitis treated at some other facility.¹⁰ After 15 years she had constipation which was progressively severe and not responding to treatment. After coming to the author hospital, she was investigated and found to have hypercalcemia and increased in the levels of parathyroid hormone levels. She was diagnosed with parathyroid adenoma. She was operated for parathyroidectomy. Patient was cured and at follow-up at one year, she was relieved of all her symptoms. Mixer in 1962 also described in their report that in case of pancreatitis, one should suspect hyperparathyroidism.¹¹ He studied 155 cases of hyperparathyroidism and found that 11 cases had pancreatitis. However, the causal association has been rejected by other research workers.

Carnaille et al, studied 40 cases of acute pancreatitis and observed that the acute pancreatitis was cured after treating the cases for hyperparathyroidism.⁷ The author also found that, this however did not prove to cure the chronic pancreatitis and subacute pancreatitis.

CONCLUSION

Thus, present case and other case reports as well as case reports demonstrates importance of investigating patients of ulcerative colitis with recent acute pancreatitis for hyperparathyroidism. This case report thus demonstrates importance of investigating patients of ulcerative colitis with pancreatitis for hyperparathyroidism.

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