Abstract:

BACKGROUND: The occurrence of acute pancreatitis is raising everyday. Management poses a great challenge when the cause is obscure. Primary hyperparathyroidism is never routinely included as a cause of acute pancreatitis. AIM: Based on a case report, patients with acute pancreatitis on a background of hypercalcaemia, have to be evaluated for primary hyperparathyroidism and to find the minimal investigations required, based on review of literature. OBJECTIVES: To include primary hyperparathyroidism as a cause of idiopathic acute pancreatitis with hypercalcaemia and initiate surgical treatment based on the positive results. CONCLUSION: Early detection of unknown cause of acute pancreatitis can be done by few investigations. Parathyroid hormone levels, ultrasound neck and sestamibi scan, which should be done routinely in a case of idiopathic acute pancreatitis with an unknown etiology.

Keyword: idiopathic pancreatitis, hypercalcaemia, hyperparathyroidism, left inferior parathyroid adenoma

CASE REPORT: 50 year old female, a known case of recurrent pancreatitis for 8 years presented with abdominal pain, vomiting and fever. Clinical diagnosis of acute on chronic pancreatitis was made. Ultrasound abdomen was done which showed evidence of pancreatitis (bulky pancreas) and absence of gall stones. Serum amylase 810 u/l and
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serum lipase-1103 u/l. Her ranson's score showed mild pancreatitis, whereas in contrary there was hypercalcemia (serum calcium-11.9 mg/dl). Patient was treated conservatively and improved. As the cause of pancreatitis was idiopathic and in view of hypercalcemia, patient was investigated for hyperparathyroidism. Parathyroid hormone levels were elevated (72 pg/ml). A Sestamibi scan was done suspecting a parathyroid adenoma, which showed a parathyroid adenoma in left inferior parathyroid gland of size 0.4X0.3 mm. Left inferior parathyroidectomy was planned and done. Post-operative period was uneventful. Biopsy report revealed parathyroid adenoma. POST OPERATIVE FOLLOW UP

1st month - Clinically no symptoms of pancreatitis. Ultrasound abdomen - no evidence of acute pancreatitis. Serum amylase - 96 u/l (28-100 u/l) Serum lipase - 56 u/l (13-60 u/l)
Serum calcium - 9.1 (8.4-9.7 mg/dl) 8th month - Clinically asymptomatic for the past 7 months. Patient was asked to follow up after 6 months.

DISCUSSION AND REVIEW OF LITERATURE

Recurrent episodes of acute pancreatitis on a background of hypercalcemia are an uncommon presentation of primary hyperparathyroidism5. Acute pancreatitis is reported to be associated with primary hyperparathyroidism in 1% – 8% of cases in some large published series5-7. Sporadically reported cases of acute pancreatitis induced by primary hyperparathyroidism, in both the recent and past medical literature, suggest that the relationship between the two clinical conditions is not incidental8-11. Carnaille et al found significant rise in serum calcium levels is of major importance in the development of pancreatitis in patients with primary hyperparathyroidism7. Increased levels of serum calcium at the first episode of acute pancreatitis should pose the suspicion of primary hyperparathyroidism. The diagnosis could be missed if serum calcium levels ranged within normal values on ranson's scoring.

The main causes of primary hyperparathyroidism are single or double parathyroid adenoma (80%), hyperplasia of all four or more existing parathyroid glands (15–20%) and rarely cancer of the parathyroid gland (2%)1,2. 20% are found retrosternally within the thymic tissue in the anterior mediastinum (1–2%) while 1% of the glands are found in the carotid sheath and 5% in the thyroid gland.2 Few researchers have advised the need for two investigatory modalities. The combination of 99mTc sestamibi scintigraphy and CT scan of the chest and neck gives important information to proceed with surgery and to reduce the risk of re-operation for recurrent hyperparathyroidism in the future3. The combination of both techniques had 100% sensitivity and 97.4% positive predictive value for the detection of the cause of primary hyperparathyroidism. The spectrum of diseases demonstrated with 99mTc scintigraphy includes eutopic parathyroid disease, ectopic parathyroid disease, solitary, double or multiple parathyroid adenoma, cystic adenoma, lipoadenoma, multiple endocrine neoplasia, entities with atypical washout and non-parathyroid entities that take up 99mTc sestamibi (normal and pathologic cervical, supraclavicular, axillary lymph nodes, hyperplastic thymus, focal soft tissue uptake from a sarcoïd or carcinoid tumor)3. The addition of early lateral views to the conventional 99mTc sestamibi scintigraphy gives more information to the surgeon, concerning the depth of the lesion in atypical sites.
and therefore sestamibi scan can be done as a primary investigation if surgery is planned.

**CONCLUSION**

Pancreatitis appears to be a complex disease in the aspect of diagnosis and management. Unknown causes make the management more vulnerable. Primary hyperparathyroidism should always be investigated on the background of idiopathic pancreatitis and hypercalcemia. Minimal investigations required are: 1. Parathyroid hormone levels 2. Ultrasound neck 3. Sestamibi scan.

**REFERENCE**


