An unusual case of pancreatitis

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Abstract:
Groove pancreatitis is a rare form of segmental chronic pancreatitis, involving the anatomic space between the head of the pancreas, the duodenum and the common bile duct. It is often a delayed diagnosis, and can be challenging, as it is often difficult to differentiate it from other entities. Differentiating from pancreatic head carcinoma may be difficult and recognition of subtle differences between these two entities is extremely important as the management differs significantly. Groove pancreatitis can be managed by conservative medical treatment, and surgery is reserved for patients with persistent and severe clinical symptoms. Hence it is paramount for clinicians to be aware of this entity, for correct diagnosis and management of this unique disease. Here we present a case report of a 35 year old man with a background history of significant ethanol intake, presenting with several episodes of acute on chronic pancreatitis. On investigation, he was diagnosed to have groove pancreatitis, and responded well to conservative management.

Keyword: Groove, segmental, pancreatitis, edematous, proliferative, pancreaticoduodenectomy, duodenal cysts

SIDE VIEWING SCOPY
A 35-year-old manual labourer, belonging to lower socio-economic status, presented to our outpatient department with a history of recurrent episodes of central upper abdominal pain over the last six months. The pain was post-prandial, worsened on oral intake, radiated to the back, and occasionally associated with non-bilious vomiting. The pain lasted for 1-2 days, and was relieved on taking parenteral analgesics at a private clinic. He was asymptomatic between attacks. There was no history of fever, abdominal distension, jaundice, pruritus or clay-coloured stools, GI bleed, constipation or obstipation. There was no history of steatorrhoea, significant weight loss, anorexia or new onset diabetes mellitus. The patient had a history of ethanol consumption 80-100g/day for the past 8 years. He was abstinent for 3 months prior to visiting our hospital. He was seen at his local primary health centre, and referred to a higher centre for further management. On examination, the patient appeared well, with stable vitals and unremarkable general physical examination. Systemic examination revealed mild epigastric tenderness. Preliminary investigations showed normal haemogram, random blood sugar, renal functions, electrolytes, liver function tests, and normal lipid profile and calcium levels.

**Serum amylase and lipase were threefold elevated (364 IU and 180 IU respectively)**

**ULTRASOUND ABDOMEN** was normal.

**SIDE VIEWING SCOPY**

*CASE REPORT:*

Biopsy was taken from the duodenal mucosa.

**UPPER GI ENDOSCOPY:**

Showed *oedematous mucosa at the junction of D1 and D2, with mild post bulbar narrowing, and proliferative mucosa in D2.*

**SIDE VIEWING SCOPY:**

Revealed *oedematous, polypoid duodenal mucosa in D2, with a shiny velvety appearance and scattered white plaques, and mild luminal narrowing. The ampulla was normal.*

**CECT ABDOMEN:**

Focal hypodense non-enhancing lesion in the head of the pancreas, with mild thickening of the adjacent duodenal wall, with peripancreatic fat stranding, normal liver, biliary tree and gall bladder.

**Differential diagnosis:**

1) Inflammatory pancreatic head mass
2) Malignant head mass

**HISTOPATHOLOGY (DUODENAL BIOPSY):**

Brunner gland hyperplasia with scant mucosal inflammatory infiltrate, with no evidence of cellular atypia.

**SERUM CA 19-9 LEVEL:** 5ng/ml (range 0 to 35 ng/ml).

With the above clinical, biochemical, endoscopic and radiological findings, a diagnosis of groove...
pancreatitis was made. Since the patient's symptoms responded to medical management in the form of 

**CECT ABDOMEN:**

bowel rest, proton pump inhibitors, analgesics, early alimentation, and had no symptoms of bowel obstruction, he was managed conservatively. He was advised regular OP follow up.

**REVIEW OF LITERATURE:**

Groove pancreatitis was initially described by Potet and Duclert in 1970 as cystic dystrophy of the pancreas and Becker in 1972 as a form of segmental pancreatitis, involving the pancreaticoduodenal groove\(^2\,^3\) It was later described as a specific entity by Stolte in 1982. Two forms are described—"segmental" and "pure".\(^2\) The former involves the pancreatic head with development of scar tissue within the groove, while the latter affects only the groove, sparing the pancreatic head.

The disease has been described in various surgical series of Whipple's from patients with chronic pancreatitis, in the range of 2.5 to 30%.\(^1\,^2\) The pathogenesis is not yet elucidated. Peptic ulcer disease, Santorini duct obstruction (due to increased viscosity of pancreatic juices, subsequent calcification and outflow obstruction), abnormal minor papilla, pancreatic heterotopia, gastric resection and true duodenal wall cysts have been suggested as possible etiologic factors.\(^1\,^2\,^4\,^6\)

**CLINICAL FEATURES:**

Patients most frequently present in their fourth and fifth decade, with symptoms of long stand postprandial epigastric pain, radiating to the back, associated with nausea, vomiting and weight loss.\(^1\,^3\,^5\) There is background H/O significant ethanol abuse. Biochemistry shows elevated pancreatic enzymes, occasionally abnormal LFTs, without clinical jaundice. Tumor markers (CEA, CA 19-9) are within normal range.\(^3\,^5\) Upper GI endoscopy often reveals and inflamed and polypoid duodenal mucosa with stenosis of the 2nd part of the duodenum.\(^1\,^4\,^6\)

**RADIOLOGY:** Abdominal ultrasound shows a hypoechoic mass.\(^4\) CECT abdomen reveals a hypodense, poorly enhanced mass between the head of the pancreas and the thickened duodenal wall.\(^4\,^5\) MRCP, EUS and/or ERCP are sometimes essential in differentiating groove pancreatitis from pancreatic malignancy. MRI shows soft-tissue-attenuation images with delayed enhancement between the pancreatic head and the adjacent duodenum. A plate like mass in the pancreaticoduodenal groove hypointense relative to the pancreatic parenchyma on T1-weighted MRI images and iso-intense or slightly hyperintense on T2-weighted MRI is said to be characteristic.\(^1\,^4\,^5\) Smooth tubular stenosis of the CBD, irregularity and dilatation of the MPD may be seen.\(^4\,^6\) Obstructive jaundice is rare, unlike in carcinoma pancreas or distal CBD. Vascular encasement by the mass is not a feature.\(^4\,^5\)

**DIFFERENTIAL DIAGNOSIS:**

Pancreatic adenocarcinoma, periampullary malignancy, pancreatic groove neuroendocrine tumor, cystic dystrophy of the duodenum and acute pancreatitis with phlegmon along the groove.\(^1\,^2\,^4\)

**TREATMENT:**

Some patients, who have pain as the chief symptom, can be managed conservatively with bowel rest and analgesics.\(^4\) But a large majority of patients require surgery in the form of a pancreaticoduodenectomy (classic Whipple's or pylorus preserving), pancreatojejunostomy, distal
gastrectomy and Billroth II reconstruction, duodenoduodenostomy, and wedge resection, due to persistent symptoms of duodenal obstruction, or suspicion of malignancy.\(^{(2,3,4,7)}\)

**PATHOLOGY:**
Gross examination of the surgical specimen shows an abundant whitish firm mass of the groove area stenosing the terminal CBD.\(^{(2)}\)
On microscopic examination, extensive fibrosis of the duodenal wall with Brunner gland hyperplasia in the submucosa may be seen.\(^{(2,5,7)}\)
Pancreatic biopsy shows evidence of chronic pancreatitis with extensive fibrosis, acinar involution and intimal fibrosis of the pancreatic arterioles. The pancreatic duct is normal, and the Santorini duct is sometimes dilated and can contain protein plugs, calcification and abscesses. Cysts in the duodenal wall and pseudocysts which contain protein-rich pancreatic juice may be seen.\(^{(1,2,3,4,7)}\)

Our patient responded well to conservative measures and is on regular follow up. This case report was presented since groove pancreatitis is a rare, often undiagnosed condition, which requires a high index of suspicion. Difficulties may be encountered in differentiating this entity from pancreatic malignancy.

**REFERENCES:**


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