ORIGINAL RESEARCH PAPER

General Surgery

A CASE OF BRUNNERS GLAND HAMARTOMA CAUSING OBSTRUCTIVE JAUNDICE

KEY WORDS:

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ABSTRACT

Brunner's gland hamartoma is a rare benign tumor of duodenum .We present a case of large pedunculated duodenal hamartoma causing obstructive jaundice and significant dilatation of intrahepatic biliary radicles. Duodenal polyp is a rare benign tumor formed from a proliferation of Brunner gland, typically forming polypoid growth in proximal duodenum and can extend up to 3rd part of duodenum. It may be incidental finding but can present in emergency with obstruction and hemorrhage requiring surgical endoscopic resection.

INTRODUCTION:

Brunner's glands (BGs) are branched acinotubular glands and they are most common in the duodenal bulb [1]. Cruveilhier was the first to define BG adenomas in 1835 [1, 2] Proliferative lesions of BG account for 5-10% of all benign duodenal masses and less than 1% of all gastrointestinal tumours . They are often identified incidentally during endoscopy. These lesions are considered benign; however, malignant cases have also been reported .

CASE HISTORY:

A 42 year old woman was admitted in our hospital with symptoms of sudden onset of severe epigastric pain and recurrent nausea and vomiting since 15 days and itching since 2 years. The pain was non aggravating and non-radiating , continuous in nature associated with occasional non bilious vomiting. On physical examination patient appeared unwell with significant pallor and jaundice and her symptoms were not subsiding even after significant dosage of opioids analgesia.

An erect chest and abdomen x ray and Ecg were reported normal. Computed tomography revealed a large pedunculated polyp in first part of duodenum which was extending up to third part of duodenum obstructing ampulla of vater and causing significant dilatation of common bile duct with dilatation of intrahepatic biliary radicles.

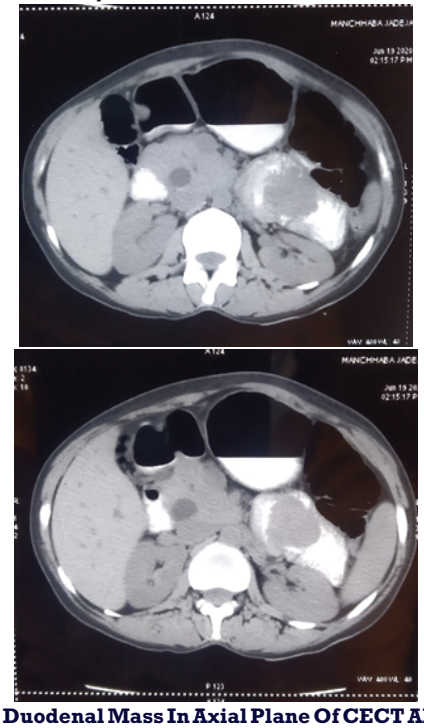

Fig 1,2 : Duodenal Mass In Axial Plane Of CECT Abdomen

Magnetic cholangiopancreatography revealed dilatation of common bile duct and formation of benign stricture in distal most common bile duct .

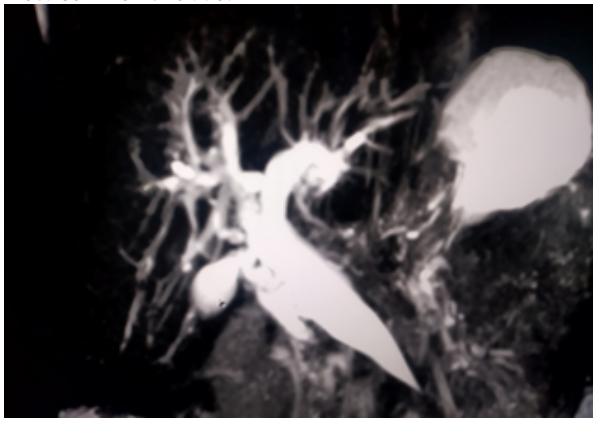

Fig 3:MRCP Showing Dilated CBD And Stricture At Distal Most Part.

On endoscopy, attempts of snaring failed due to involvement of ampulla by stalk of polyp, which was distinctly originating just above the ampulla.

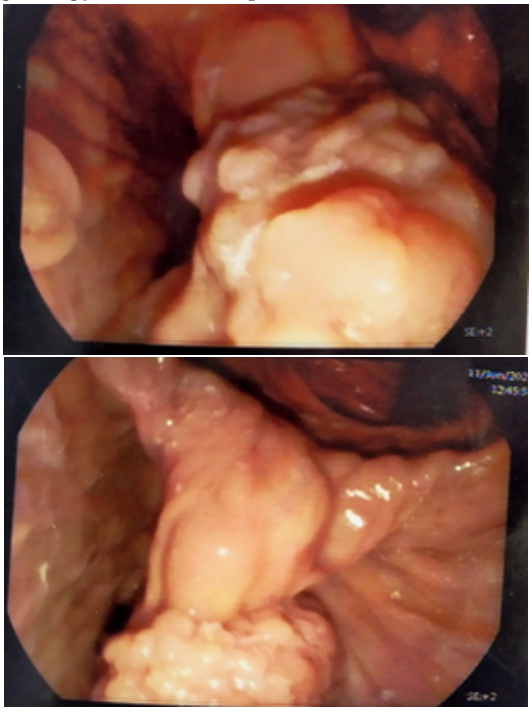

Fig 4 : Upper GI Scopy Suggestive Of Polyp In Duodenum Covering Ampulla Of Vater.

Patient was given total parenteral nutrition and planned laparotomy was taken with chevron incision . The findings revealed a large 5x3.5x2 cm pedunculated polyp with wide stalk originating from the posterior wall of first part duodenum and extending up to the third part of duodenum covering the ampulla of vater.

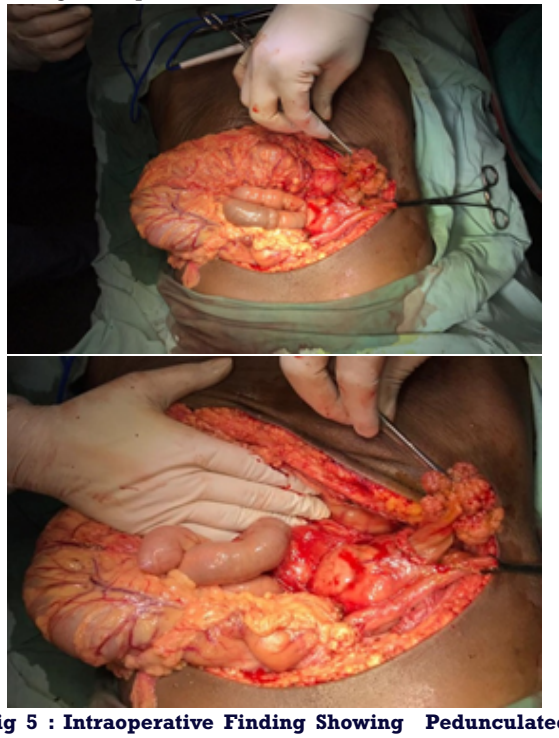

Fig 5 : Intraoperative Finding Showing Pedunculated Poly In Duodenum

Duodenotomy was performed and polyp was removed. Biliary and pancreatic stents were placed which was later confirmed by C –arm ,simultaneously a feeding jejunostomy was performed.

Patient was kept nil by oral for 2 days and later liquids were supplemented through feeding jejnunostomy . Postoperative patient remain uneventful, further enteral nutrition was started. On subsequent investigations liver function test became normal. Patient was discharged on day 10 and was advised for removal of feeding jejunostomy tube post 21 days of surgery.

Polyp histology revealed duodenal mucosal gland lined by tall columnar epithelium with cystic dilation in some area and no dysplasia and malignancy in it, suggestive of benign hamartomata's polyp of duodenum.

DISCUSSION & CONCLUSION:

Hyperplasia of Brunner glands with a lesion greater than 1 cm was initially described as a Brunner gland adenoma.Several features of these lesions favor their designation as hamartomas, including the lack of encapsulation; the mixture of acini, smooth muscles, adipose tissue, Paneth cells, and mucosal glands; and the lack of any cell atypia[2]. These hamartomas are rare, with approximately 150 cases described in the literature. It is estimated that they represent approximately 5-10% of benign duodenal tumors.

Brunner's gland hamartoma occurs most commonly in the fifth and sixth decade of life with no gender or race predominance[4]. Most of them are asymptomatic and diagnosed incidentally by imaging studies or present with nonspecific vague abdominal pain, discomfort, nausea or bloating. In such cases small polypoid lesions may appear at barium examination or at endoscopy[5]. Symptomatic tumors can be divided into two categories viz. hemorrhagic and obstructive. The obstruction occurs when the hyperplasia is diffuse or a single adenoma grows too large, causing epigastric bloating, pain, nausea, vomiting and weight loss[6]. The hemorrhagic manifestations due to ulceration or erosion of the tumor are melaena, fatigue, anemia and rarely hematemesis[7]. Uncommon presentations include obstructive jaundice, biliary fistula, recurrent pancreatitis or intussusception[8].

Either endoscopic polypectomy or confined surgical resection should be performed in symptomatic patients. Lesions >2 cm in diameter are best treated by surgical resection. When feasible, the surgical

procedure should be a transduodenal polypectomy or segmental duodenal resection for hamartomas located in the first, third and fourth portion of the duodenum. Lesions in the second portion may require duodenal bypassing, in the form of pancreaticoduodenotomy.

The most peculiar finding in this case is size of polyp which was large and very cases of such large polyp has been reported and origin of it from the first part of duodenum which lead to obstructive features in duodenum and also simultaneously obstructing the ampulla of vater causing retrograde dilatation of whole common bile duct till intra hepatic biliary radicle and forming benign stricture in it leading to jaundice .

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