MAJOR PANCREATIC DUCT PAPILLOMA: A RARE ENTITY IN CHILDREN

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Abstract

We present the case of a 6 year old girl presented with recurrent abdominal pain of short duration. Radiologic examination revealed a tumor located in the major pancreatic duct near the confluence with common bile duct. The patient recovered completely following pancreationo-duodenectomy. Histology of the tumor confirmed pancreatic duct papilloma, a rare tumor. We report this case because of its rarity in a young child.

Keywords: pancreatic duct tumor, pancreatic duct papilloma, major pancreatic duct, pancreatitis.

Introduction

Pancreatic ductal tumors are a rare cause of chronic obstructive pancreatitis in children. Examples of such tumors are mostly intraductal mucinous neoplasms or papillary cystic tumors. These intraductal tumors cause flow obstruction of pancreatic exocrine secretions leading to dilatation of the major pancreatic duct and recurrent abdominal pain. We present the case of a young girl diagnosed with a pancreatic duct papilloma which was successfully treated.

Case Report

A 6 year old female child presented with recurrent abdominal pain for 2 months, non-bilious vomiting, weight loss and loose stool. She did not have any significant illness prior to these symptoms. On examination, she was pale and had epigastric tenderness. Her biochemical parameters were normal except moderately high serum amylase and lipase. Ultrasonography showed a small lobulated mass at the confluence of the major pancreatic duct (MPD) and the common bile duct (CBD). MPD was dilated and tortuous, characteristic of chronic pancreatitis. CT scan showed bulky pancreas with dilated and tortuous MPD. Magnetic resonance cholangiopancreatography (MRCP) showed similar findings with evidence of a mass noted in the MPD near the confluence (Fig. 1). On exploration, the pancreatic head was found to be bulky and edematous. Rest of the pancreas was nodular and firm. Gall bladder and CBD were normal. An intraductal papillary mass was noted in the proximal MPD. Duodenotomy was done and a peri-operative cholangiogram performed. Whipples pancreatico-duodenectomy was performed with a Roux-en-Y pancreatico-jejunosomy. The patient recovered well and was discharged on day 10. Histology of the tumor showed structure of pancreatic duct papilloma (Fig. 2). She has been on follow up for last 6 years. She had a few episodes of upper abdominal pain in the first 6 months after surgery but remained asymptomatic since then. Her liver and pancreatic enzyme levels were within normal limits.

Discussion

Pancreatic duct papilloma is a very rare intraductal neoplasm in children with only a few case reports found in the English literature. Gonzales et al. [1] reported an 8-year-old girl with pancreatic papillary neoplasm, who presented with chronic abdominal pain as the sole symptom. CT and MRI scan confirmed a tumor in the pancreatic body and tail, which was surgically removed. Histological exam showed solid
cystic pancreatic epithelial papillary neoplasm. The patient did well without further treatment. Nutz et al. [2] reported a similar case of chronic obstructive pancreatitis caused by pancreatic duct papilloma. Nishihara and Tsuneyoshi [3] performed nuclear morphometry in 21 adult cases of pancreatic papillary cystic tumors and suggested that nuclear morphometry and histological variables may help define the metastatic potential of these tumors. Zapiach et al. [4] observed intraductal papillary mucinous neoplasms associated with pancreatic calcification. The authors suggested that calcifying obstructive pancreatitis resulted from prolonged partial obstruction of the pancreatic duct.

Bounds [5] advocated the use of endoscopic ultrasonography combined with fine needle aspiration cytology for diagnosis of such lesions and to differentiate from other cystic neoplasms of the pancreas. Jung et al. [6] found pancreatoscopy to be of diagnostic value in addition to CT, transabdominal ultrasound and ERCP in the differential diagnosis of poorly defined pancreatic lesions, particularly when assessing alterations of the ductal caliber without parenchymatous lesions. Although pancreatic papillary neoplasms are thought to have malignant potential in adults, this may not be true in case of papillary tumors in children. In both the reported cases of pancreatic duct papilloma, the patients did well after surgical resection of the tumors along with a part of the pancreas. In the present case the patient recovered well after pancreatico-duodenectomy. During the initial 6 months after surgery, she had recurrent epigastric pain, which subsided with time and has been asymptomatic since then for last 6 years. Her follow up CT scan showed regression of duct dilatation and pancreatic enzymes were within normal limits.


