ANNULAR PANCREAS IN THE ADULT WITH STONES AND ADENOMYXOMA AT THE DISTAL COMMON BILE DUCT

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ABSTRACT

A case of symptomatic annular pancreas complicated by CBD stones. CBD septum and adenomyxoma of the CBD was reported. UGI series showed circumferential narrowing of the second portion of the duodenal loop. Oral contrast CT scan showed pancreatic tissue around the contrast filled duodenal loop. Post PTC CT scan showed a well defined defect in the contrast filled dilated CBD which was due to stones.

INTRODUCTION

Annular pancreas was first described by Tiedemann in 1818 (1). It developed as a result of failure of the tip of the ventral pancreatic anlage to rotate completely to the right and posteriorly with the duodenum allergely produces a band of elongated pancreatic tissue about the viscus (2). A band of glandular tissue embraced the duodenum circumferentially. In the adult the annulus is consistently located about the second portion of the duodenum (3). Symptomatic annular pancreas in the adult is uncommon (2,4).

CASE REPORT

A 47-year-old woman developed jaundice two months post partum. She was a known thalassemia-Hb E patient. Liver function test indicated obstructive jaundice.

Upper GI series showed severe narrowing lumen of the 2nd portion of the duodenal loop by a circumferential lesion with partial obstruction (Fig.1). Percutaneous cholangiography revealed moderate degree of dilatation of the intrahepatic ducts and extrahepatic bile duct. Severe narrowing lumen of the distal CBD is seen with overhanging edge appearance of the upper border of the lesion (Fig.2). Oral enhanced and post PTC CT scan showed the pancreatic tissue to be around the 2nd portion of the duodenal loop (Fig.3a) and a round filling defect in the contrast filled CBD (Fig.3b).

At surgery and pathology, annular pancreas was seen. Adenomyxoma was noted involving the ampulla of Vater and distal CBD. Choledocholithiasis and CBD septum were also found.

PTC = Percutaneous Transhepatic Cholangiography

DISCUSSION

Annular pancreas is seen in patients from the neonate to the eighth decade of life. In adults, it is most common between the third and fifth decades of life, and is seen twice as frequently in men as in women (6). The symptoms of annular pancreas are frequently those of secondary pathologic states, most commonly peptic ulceration and pancreatitis (7). Annular pancreas in infants is often associated with many other congenital malformations. In adults, the annular pancreas is usually an isolated findings (8).

Changes in the duodenal loop by upper GI series had been reported (6,9,11) including the following: a) eccentric smooth annular defect of the

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Fig.1 UGI series showed a circumferential narrowing lumen-lesion at the second portion of the duodenal loop; overhanging edge was seen at both ends of the lesion. Only partial obstruction was seen.

outer margin of the second portion of the duodenum retracting it medially, b) symmetric dilatation of the proximal duodenum with bulging of the recesses on either side of the annular band, c)mucosal effacement without destruction, d) reversed peristalsis in the proximal dilated duodenum, e) absence of spastic phenomena, f) accentuation of the findings in the right anterior oblique position, and g) lack of change on repeated examinations. the "double bubble" sign associated with pediatric cases is of no value in adults(7).

Contrast material in the duct of annular pancreas on ERCP was reported by Glazer (12) and Yogi (13). Pancreatic tissue encircled the second portion of the duodenal loop was shown on CT scan (14,15) and on MRI (15).

Fig.2 Percutaneous transhepatic cholangiography (PTC) revealed dilatation of both intra-and extrahepatic bile duct. A filling defect was noted at the distal part of the CBD, causing nearly complete obstruction of the lumen. An overhanging edge was seen at the superior end of the lesion, caused by stones. The lesion distal to the stones was difficult to evaluate.

ERCP = Endoseopic Retrograde Cholangio-pancreatography

Similar findings by upper GI series and oral contrast CT scan were also shown by us. PTC findings in this case were the combined results of annular pancreas, CBD stones, adenomyxoma and septum in the CBD. Stones in this case, is probably secondary to prolonged CBD obstruction and hemolysis in the thalassemic patient.

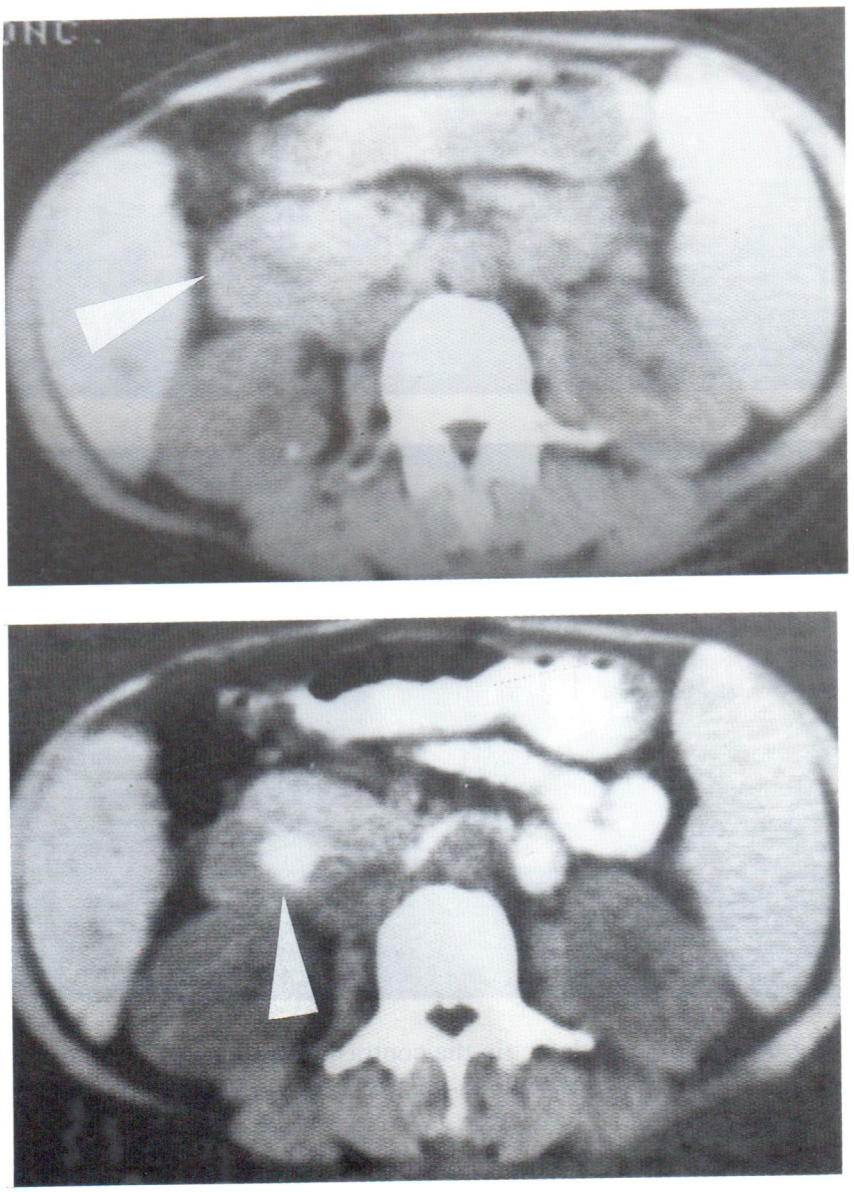

Fig. 3a. Plain CT scan showed bulging contour of the pancreatic head with a faint low density area in the center represent CBD. Oral contrast filled CBD was seen in the center of the bulged pancreatic head.

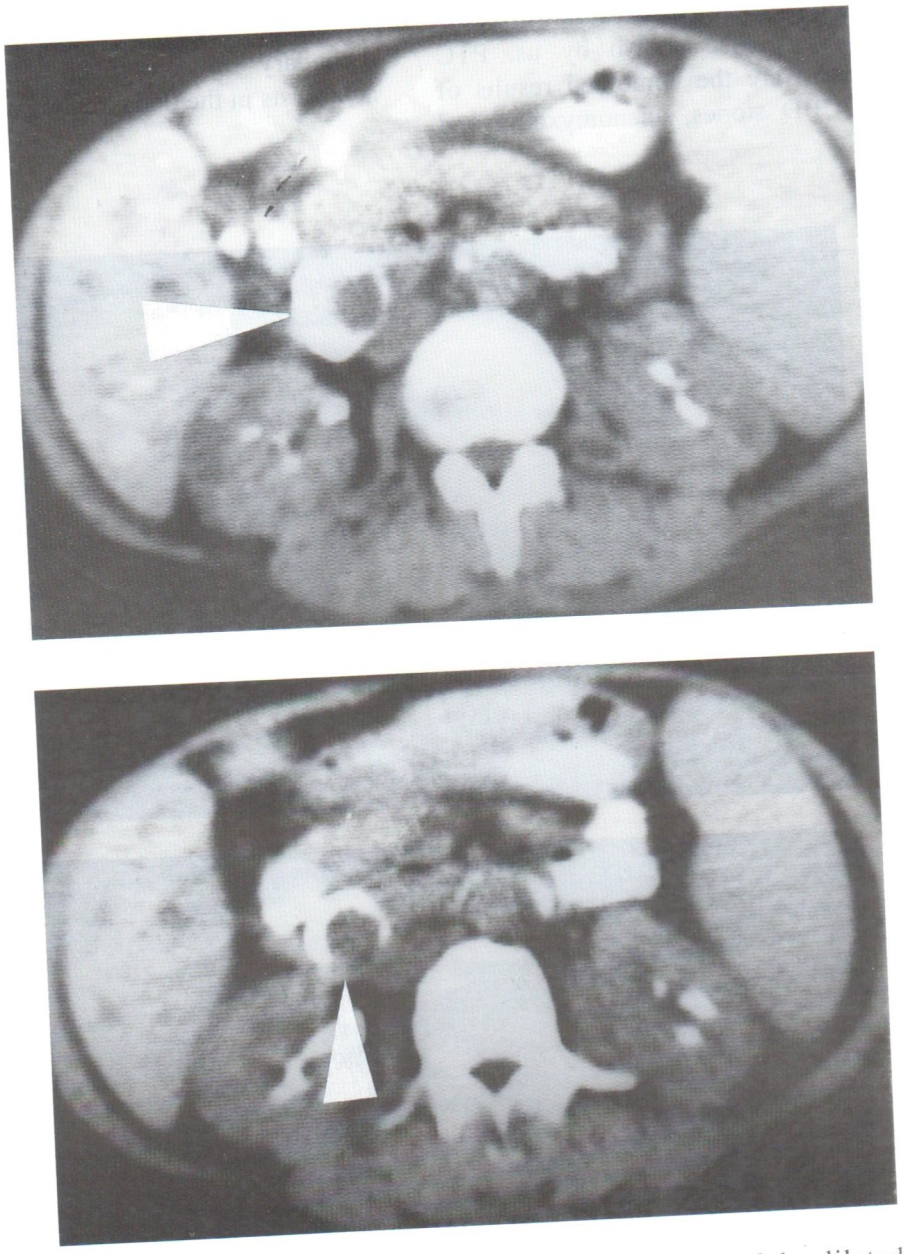

Fig. 3b. Soft tissue defect in the contrast-filled lumen of the dilated CBD represented non-opaque stones, visualized on post PTC CT scan.

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