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PAEDIATRIC SURGERY

ANASTAMOTIC STRICTURE WITH BILIARY CALCULI IN POST OPERATIVE CASES OF CHOLEDOCHAL CYST

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ABSTRACT Choledochal cyst is a congenital dilation of the bile duct that requires surgery for its correction. Long term follow up of children that undergo surgery for choledochal cyst have documented complications like cystolithiasis followed by cholangitis, acute pancreatitis, hepatolithiasis, malignancy, portal hypertension and chronic pancreatitis. Dabbas et al , reported a 5% incidence in biliary stone formation1. We report three such cases of biliary lithiasis after surgery for choledochal cyst. Biliary reconstruction and excision of the cyst holds excellent prognosis in the treatment of choledochal cysts. Post operative close surveillance of patients undergoing cyst excision and hepaticojejunostomy must be strongly advocated to identify early and late complications. Detection of early intrahepatic biliary stenosis and creation of a wide anastomosis are essential to prevent anastamotic strictures and biliary stone formation.

KEYWORDS : choledochal cyst, anastamotic stricture, biliary stone

INTRODUCTION

Choledochal cyst is a congenital dilation of the bile duct that requires surgery for its correction. Long term follow up of children that undergo surgery for choledochal cyst have documented complications like cystolithiasis followed by cholangitis, acute pancreatitis, hepatolithiasis, malignancy, portal hypertension and chronic pancreatitis. Dabbas et al , reported a 5% incidence in biliary stone formation1. We report three such cases of biliary lithiasis after surgery for choledochal cyst.

CASE REPORTS

CASE 1

A ten year old girl child , a post op case of choledochal cyst who underwent surgery at six years of life, was admitted following repeated episodes of vomiting , fever, upper abdominal pain and jaundice. The child was evaluated and her ultrasound revealed intrahepatic biliary dilation with biliary lithisasis. MRCP revealed partial stricture of left hepatic duct and multiple calculi. A re-laparatomy was done with revision of hepaticojejunostomy with extraction of the biliary calculi. The child had a biliary leak post operatively that was managed conservatively.

CASE 2

A 2 year old female child presented with complaints of abdominal pain and bilious vomiting. The child was a known case of perforated choedochal cyst on whom a hepaticojejunostomy was done. When evaluated, the child had features of cholangitis for which the child was managed with intravenous antibiotics. An ultrasound revealed dilated intrahepatic biliary radicles with biliary calculi. MRCP suggested an anastamotic stricture. A relaparotomy revealed anastamotic stricture with calculi for which a revision wide hepaticojejunostomy was done. The child had an uneventful postoperative period.

CASE 3

A 12 year old girl, a post op case of choledochal cyst at 6 years of age was evaluated for repeated episodes of vomiting and upper abdominal pain and jaundice . USG revealed intrahepatic biliary dilation and multiple calculi. MRCP showed features of left hepatic duct stricture with multiple calculi. Re-laparotomy was done when a revision hepaticojejunostomy was done. The child had an uneventful post operative period.

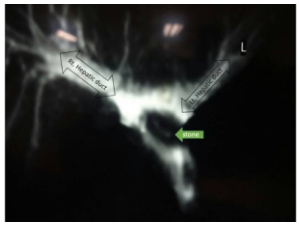

Fig 1. MRCP SHOWING CALCULI AND STRICTURE

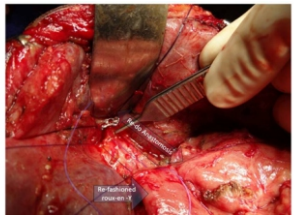

FIG 2: INTRAOPERATIVE PICTURE SHOWING REDO ANASTAMOSIS

Discussion

Choledochal cyst is a congenital dilation of the extrahepatic and or or intrahepatic bile duct . The accepted surgery for choledochal cyst worldwide is, complete removal of the cyst and hepaticoje junostomy. Complications like pancreatitis, biliary cirrhosis, intrahepatic lithiasis, anastamotic strictures have been reported [2]

Intrahepatic lithiasis has a documented incidence of 5%1. Anastamotic strictures cause repeated attacks of cholangitis and bile stasis that cause biliary lithiasis [3,4,5]. Yamataka et al ,found that the lesser the age , lesser the chances of anastamotic strictures . he also found that the degree of inflammation was less severe in younger children indicating that the hepatic duct is less affected in younger children for anastomosis6 . Anastamotic trictures were influenced by the type of choledochal cyst, size of cyst, duration of symptoms [7].

Improving surgical technique, maintaining vascularity, surgery on a mildly inflamed cyst wall, creation of a wide (>1cm) , tension free anastamosis remain the key to prevent anastamotic strictures[3,7,8]. Revision of the anastomosis is usually advocated in children.

Prevention of late postoperative complication can be achieved only with meticulous thorough surgical treatment [9,10].

Conclusions

Biliary reconstruction and excision of the cyst holds excellent prognosis in the treatment of choledochal cysts. Post operative close surveillance of patients undergoing cyst excision and hepaticojejunostomy must be strongly advocated to identify early and late complications. Detection of early intrahepatic biliary stenosis and creation of a wide anastomosis are essential to prevent anastamotic strictures and biliary stone formation.

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