

CHOLEDOCHODUODENOSTOMY: A VIABLE AND SAFE PROCEDURE IN PATIENTS WITH OBSTRUCTIVE JAUNDICE

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A total of 27 patients with jaundice and/or other clinical, ultrasound or laboratory based diagnostic criteria of choledocholithiasis were included in this study. Perioperatively, all patients were well hydrated and received antibiotics perioperatively. Supraduodenal cholecystectomy was performed after cholecystectomy. Choledochoduodenostomy was performed using an interrupted stitch with catgut 2/0. There were no mortalities in our series.

A few minor problems arose in two of our patients postoperatively. We suggest that Choledochoduodenostomy is a useful operation, technically easy, gives good results and should be practiced more often for both primary and secondary gall stones.

INTRODUCTION

Obstructive jaundice is one of the commonest ailments presenting to a surgical ward. Choledochoduodenostomy is one of the management options. We present a series of 27 cases who underwent this procedure with no untoward effects. We recommend this procedure as a primary method of dealing with these patients because of its ease and efficacy.

MATERIALS AND METHODS

A total of 27 patients with jaundice or with signs and symptoms of choledocholithiasis were included into this study. Preoperatively, the patients were well rehydrated. All the patients had perioperative antibiotics. After cholecystectomy, supraduodenal choledochotomy was performed. The stones from the bile ducts were removed using Desjardin's

forceps, Fogarty catheters and flushing the ducts with saline. A longitudinal choledochotomy and a transverse duodenostomy were made. The Choledochoduodenostomy was performed using an interrupted stitch. The material was catgut 2/0. The indications for this procedure were multiple Common Bile Duct (CBD) stones, impacted distal stone, and massive CBD dilatation without stones.

We reached preoperative diagnosis of choledocholithiasis by combining the ultrasonographic findings in the bile duct with those in the gall bladder and the result of biochemical Liver Function Tests (LFTs). At laparotomy, besides the preoperative information, the size of CBD (>1.5 cm) and a palpable stone (which has a 98% accuracy) were taken as indications for choledochotomy.

RESULTS

In the last five years we have treated twenty-five cases of choledocholithiasis. Of these 22 were females and 5 males. The age ranged from 12 to 71 years. The twelve years old was a boy who had been suffering from recurrent upper abdominal pain and mild jaundice. At operation he had distal stricture of the CBD that contained sludge. 15 patients had obstructive jaundice. The rest had typical symptoms and signs of choledocholithiasis/cholelithiasis. Only one patient had the GB removed in the past. This patient presented with recurrent/retained stones in the bile ducts plus jaundice. The remainder 26 patients with

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choledocholithiasis and intact Gall Bladder (GB) had either cholelithiasis or abnormal LFTs or both.

In our series, there was no mortality. One patient developed a bile leak that stopped spontaneously after six days. Another went into semi-coma for three days postoperatively but made a complete recovery. This patient was jaundiced preoperatively. The cases who had been in touch postoperatively did not show any untoward effects.

DISCUSSION

Cholecystectomy is one of the commonest operations a surgeon has to perform. In a good number (10-20%) of cholecystectomies, exploration of the CBD becomes necessary due to choledocholithiasis. The incidence of CBD stones is 8-15%. Also the incidence of retained stones after a choledochotomy is about 4-7%. Preoperative diagnosis of choledocholithiasis can be easily made.

PREOPERATIVE DIAGNOSTIC POINTERS FOR CHOLEDOCHOLITHIASIS:

1. Pain, fever with rigors or history
2. (Charcot's biliary triad).
3. Ultrasonographic evidence of:
 - a. Stones in the bile ducts.
 - b. Dilated bile ducts.
4. Raised alkaline phosphatase.
5. Raised bilirubin.

The specificity of these investigations is 90- 100%. The management of obstructive jaundice secondary to bile stones is basically surgical and non-surgical. Endoscopic clearance has become the gold standard in developed countries. This can be performed preoperatively to relieve the obstruction, followed by cholecystectomy as a secondary procedure. Also any retained stones can be removed post operatively. Unfortunately, the facilities and expertise are not available in our province. Surgical exploration is our only option for primary and retained stones. Any one of the biliary drainage procedures is adopted.

1. Supraduodenal Choledochoduodenostomy
2. Transduodenal sphincteroplasty
3. Supraduodenal choledochotomy and T-tube drainage

The latter procedure still leaves the problem of a possible missed/retained stone in the CBD that would entail a major operation for its removal. We do not

have facilities of on table post choledochotomy cholangiogram.

The operation of our preference is Supraduodenal Choledochoduodenostomy. We find it easier to perform and it allows us to make an adequate stoma without danger of subsequent stenosis. This operation was first described by Reidel in 1888 but his patient died nine hours later with disrupted anastomosis. In 1890 Spregel performed the first successful choledochoduodenostomy and gave its present name. Since then a lot of cases of choledochoduodenostomy have been published throughout the world by many authors with negligible complications and good results. After choledochoduodenostomy the chance of recurrent/retained calculus is almost nil. The accepted indications and contra-indications for choledochoduodenostomy are:

INDICATIONS FOR CHOLEDOCHO - DUODENOSTOMY:

1. Multiple CBD calculi
2. Massive CBD dilatation without stones
3. Papillary stenosis
4. Impacted distal stone
5. Intrahepatic calculi
6. Narrow distal CBD segment
7. Perivaterian duodenal diverticuli
8. Primary CBD stones
9. Residual stones
10. Low iatrogenic stricture
11. Equivocal preoperative cholangiogram

CONTRA-INDICATIONS FOR CHOLEDOCHO - DUODENOSTOMY:

1. Non dilated CBD
2. Sclerosing cholangitis
3. Decompression of the pancreatic duct for pancreatitis
4. Malignant obstruction
5. Significant duodenal oedema or inflammation

To conclude we suggest that choledochoduodenostomy is a useful operation, technically easy and results are good, hi our conditions this operation should be practiced more often for both primary and secondary gall stones as we still lack other modern alternatives for dealing with choledocholithiasis.

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