INTRAHEPATIC CHOLANGIOJEJUNOSTOMY FOR MALIGNANT HILAR BILIARY OBSTRUCTION: APPROACH TO THE LEFT HEPATIC DUCT

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ABSTRACT

Biliary enteric anastomosis for relief of biliary obstruction caused by malignancy at the confluence of the bile ducts can be difficult due to non availability of an adequate length of duct for anastomosis. This paper describes an approach to the left hepatic duct to decompress the biliary tree and its successful application in 11 of 12 patients who presented with malignant hilar obstruction.

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KEYWORDS : Hepaticojejunostomy; Malignant biliary obstruction.

Introduction

Majority of patients presenting with surgical obstructive jaundice (SOJ) due to high malignant biliary strictures due to primary or secondary malignancies are not suitable for resectional surgery. Decompression in these patients can be achieved by non operative biliary drainage or biliary enteric anastomosis to a roux-en-Y loop of jejunum. Recent data, both prospective and retrospective have supported stent placement percutaneously [1] or endoscopically [2] to offer satisfactory palliation when compared to surgical decompression. However, published literature addressing the appropriate management of patients with unresectable hilar tumours has been sparse and inconclusive [3]. Non operative drainage requires an expert in endoscopy or/and interventional radiology in a specialized centre dedicated to managing such problems. However, surgical decompression cannot be discarded, as it is the simplest and cheapest alternative [4]. Often the hepatic duct is difficult to display at surgery for an anastomosis either due to its deep anatomical location or, due to, malignant infiltration. In such circumstances the left hepatic duct may be approached by the ligamentum teres approach [5]. The technique has been in use for over 3 decades [6] but has gained popularity over the last decade [7].

The object of this paper is to describe the ligamentum teres approach and its application in 11 out of 12 patients with SOJ.

Material and Methods

During the period Jun 93 to Jan 95, 11 patients underwent segment III cholangioenteric anastomosis for malignant biliary obstruction at the hilum. The group included only those cases where the extrahepatic bile duct was unavailable for an anastomosis due to tumour involvement or nodal disease.

Diagnostic evaluation included a detailed clinical examination followed by biochemical and radiological investigations. Anatomic localization of the level of obstruction and patency of the confluence of left and right hepatic ducts was assessed by ultrasonography (USG) in all cases. Computerized tomography (CT), percutaneous transhepatic cholangiography (PTC) and endoscopic retrograde cholangiography (ERC) were resorted to obtain a biliary road map wherever essential. Coagulation parameters were assessed to exclude vitamin K dependant factor deficiencies.

Patients were operated upon after correction of anaemia and coagulation defects. Preoperative biliary decompression was not employed. Segment III cholangioenteric anastomosis was done using the ligamentum teres approach as described by Blumgart and Kelly in 1984 [8].

Technique: All patients were operated through a bilateral subcostal incision. The ligamentum teres was divided and falciform ligament freed from the abdominal wall back to the diaphragm. The liver was elevated by an upward pull on the ligamentum teres to display the hepatic undersurface. The bridge of liver tissue connecting the left lateral segment of the liver to the quadrate lobe was divided and haemostasis secured. The liver was now held up with retractors and the ligamentum teres pulled to display the goose's foot where it splays and joins the left branch of portal vein. These extensions were dissected and divided between ligatures thus displaying the left hepatic duct above the portal vein. A 60 cm roux loop was anastomosed in a side to side manner to the left hepatic duct. The anastomosis was stented with a T-tube during the initial cases but was given up later as the tube usually got dislodged from the anastomotic site during early postoperative period without any untoward effects.

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TABLE
Symptoms and signs

Symptoms	
Jaundice	12
Weight loss	12
Pruritus	8
Pain abdomen	8
Fever	3
Signs	
Hepatomegaly	10
Ascites	6
Gall bladder mass	5

Observations

There were 2 males and 10 females who were operated. Sege-ment III bypass was effected in 11 patients. The procedure was abandoned in one case as the extent of nodal disease precluded safe dissection. He died of disseminated Hodgkin's lymphoma.

The mean age was 58 years (range 31 to 60 years). Average duration of symptoms was 32 days (range 14 to 62 days). Patients presented with jaundice, acholic stools, pruritis, weight loss and ill health. Most had hepatomegaly, 5 had a distended gall-bladder and 6 had ascites.

Serum bilirubin levels ranged 7 to 26 mg per cent with a mean of 13.3 mg per cent. Alkaline phosphatase levels were raised in all patients. Prothrombin times were moderately prolonged prior to correction. USG could identify level of block and confirm patency of the confluence of bile ducts in 7 cases. Five cases needed an invasive cholangiographic procedure to confirm patency of the confluence (3 ERC and 2 PTC).

Thirty day mortality was nil. All patients reported regression of pruritus within 3 days. Serum bilirubin levels declined to the range of 3 to 5 mg per cent in 4 to 6 weeks time. Two patients developed cholangitis and were managed successfully by conservative means. Wound sepsis in 3, ascitic fluid leak in 4 and pulmonary complications in 3 patients was observed.

Patients died of progressive disease between 2 and 18 months. The mean survival was 5 months. Etiologically gallbladder cancer was the commonest cause, occurring in 7 patients followed by cholangiocarcinoma in four.

Discussion

The prognosis in a patient with SOJ due to hilar block is poor and treatment aim is palliation. To achieve effective palliation bilobar decompression should be achieved wherever possible. However, even decompression of a single lobe in hilar obstruction can offer significant palliation in a jaundiced patient [8].

Intra hepatic biliary anastomosis can be performed offering excellent palliation in malignant disease [9]. Our group of 11 patients had a mean survival of 5 months. Similar survival benefit are reported in other series of palliative bypass procedures [10,11]. Survival results reported by advocates of stents are also similar. The advent of new expandable stents may offer a ma-

jor advance in palliation of malignant SOJ patients considered unfit for anaesthesia [12]. There are others who believe that in patients fit to undergo major surgery, tumour resection with or without hepatic resection and intra hepatic biliary anastomosis are often the only chance of cure for all patients with potentially resectable lesions [10]. The patient index of comfort after surgical bypass is found to be better than after stenting [13].

Majority of patients with malignant hilar block unsuitable for section in our practice are due to carcinoma gallbladder. Till expertise with interventional procedures develops and becomes freely available, operative treatment cannot be relegated to the archives as it is the cheapest, simplest and readily available alternative for patients [4].

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