

OBSTRUCTIVE JAUNDICE

ESSAY

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BY

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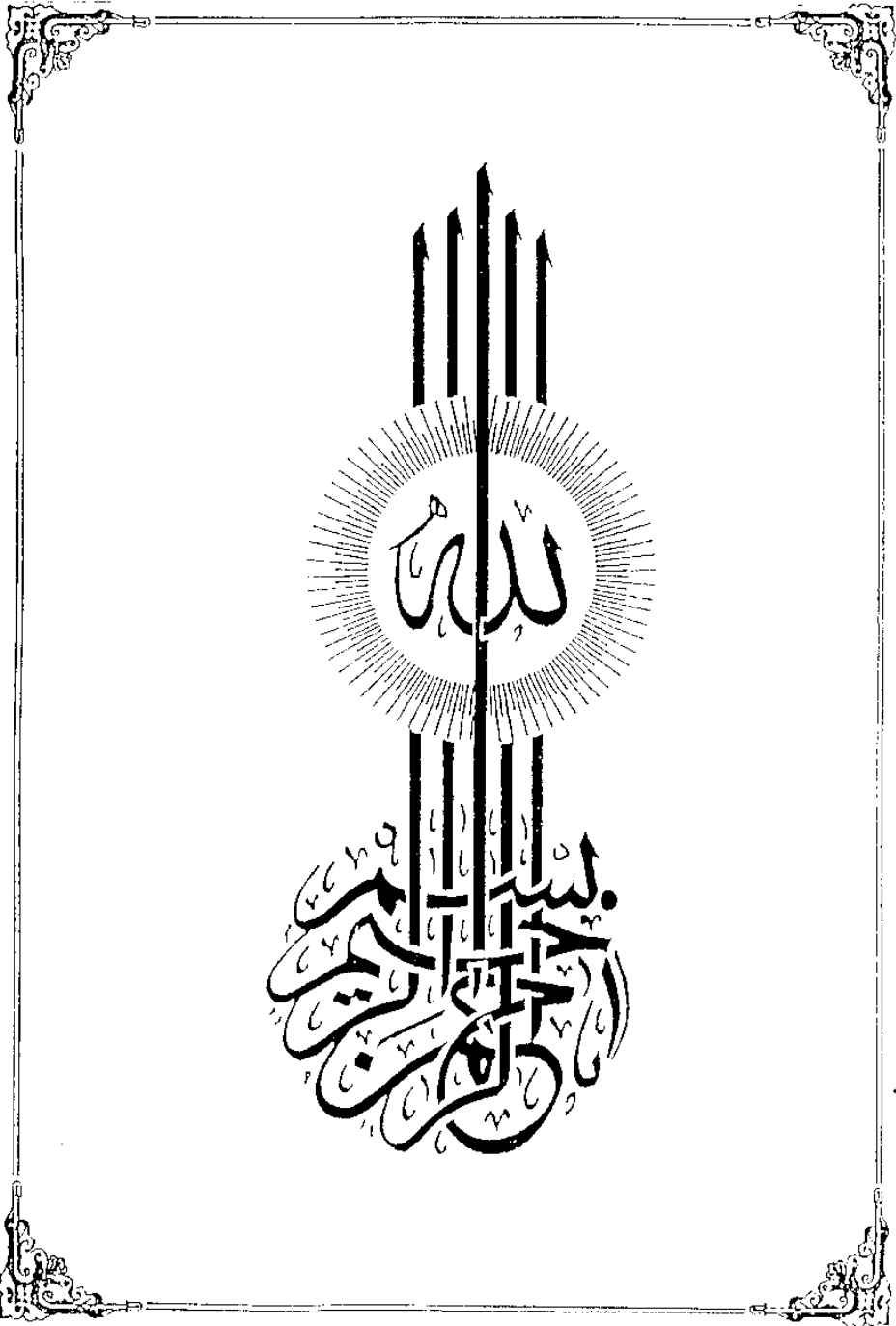
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I N T R O D U C T I O N

INTRODUCTION

Obstructive jaundice is a surgical condition of special interest. The effects of bile retention on the body affect very much the attitude of the surgeon towards a case.

Renal, cardiovascular, heamatological and other derangements are of profound effects during the pre-operative and post-operative periods.

This essay is a concise display of some metabolic items of obstructive jaundice together with a brief outline of some important surgical aspects.

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AETIOLOGICAL FACTORS OF BILE DUCT OBSTRUCTION

Though the most common causes of biliary tract obstruction are choledocholithiasis, strictures of the common bile duct, and tumours, yet many other causes could be enumerated (Benjamin, 1982).

It is necessary for the clinician to recognise at least the following four categories of biliary tract obstruction.

I- INTERMITTENT OBSTRUCTION:

(1) Choledocholithiasis:

Nearly all calculi found in the main bile ducts draining the liver were originally in gall bladders, then migrating down the cystic duct into the common bile duct.

Occasionally, stones impact in the narrow terminal segment of the duct giving rise to complete obstruction and producing a clinical picture which may be indistinguishable from that of carcinomatous obstruction of the common bile duct. This however, is rare and in the great majority of instances, the sudden narrowing of the duct at the junction of its two portions prevents the stone passing further, so that it is retained in the relatively wide main portion of the duct. Stones in the common bile duct

may give one of two pictures; of acute obstruction giving rise to obstructive jaundice, due not only to the bulk of the stone, but also to the spasm of the muscle gripping the stone, **and** to oedema of the duct wall.

The other picture is chronic obstruction, which is incomplete obstruction of the bile duct insufficient to cause jaundice (Bolton and Quesne, 1981).

Choledocholithiasis, with or without an intact gall bladder is the most common cause of extrahepatic obstruction of the bile duct. The bile duct, though usually dilated may be of normal size even in the presence of jaundice (Shapiro, 1981).

Stones in the CBD are commonly associated with organisms in the bile. The combination of infected bile and biliary obstruction can cause serious local and systemic infective complications.

(2) Periapillary Tumours:

The periampullary tumours provide a clinical pitfall of great importance, since these lesions have a high resectability rate and the potential for curative surgery. All patients with obstructive jaundice, including those with transient attacks, must arouse a suspicion of this lesion.

In patients who present with jaundice due to this cause, P T C will demonstrate dilatation of the biliary tree with a distally placed obstruction. It may be difficult to distinguish between tumours of the periampullary region and other filling defects, such as small stones, particularly when the tumours are of the intraductal papillary variety. It is therefore important to follow up such a radiological finding with endoscopy or E R C P. We have seen such tumours associated with stones in the common bile duct. The value of biopsy and cytology for this lesion is important (Bowley and Benjamin, 1982).

In malignant obstruction, it is important to distinguish between tumours of the extrahepatic biliary tree and those of the head of the pancreas, also to distinguish those tumours affecting the periampullary region. The exact origin of the tumour within the periampullary region is probably the most important factor in determining potential curability. Satisfactory five-years survival of up to 40% have been reported for patients with periampullary malignancies (Grieco et al, 1980).

(3) Intrabiliary Parasites:

Biliary ascariasis, biliary hydatid disease, fascioliasis, and clonorchiasis in endemic areas of

the tropics may result in partial biliary obstruction.

Biliary obstruction is a result of the presence of the worm, plus sphincter spasm and papillitis as in the case of heavy duodenal infestation by *Ascaris Lumbricoides*, or it may be a result of inflammation of the biliary epithelium and periductal fibrosis, or the obstruction may result from stones formed around worm debris. Also, there is an increased incidence of carcinoma of the bile duct in endemic areas in cases of clonorchiasis.

Biliary strictures and biliary calculi are late complications resulting in partial biliary obstruction, complete obstruction with jaundice is uncommon. Suppurative cholangitis is another serious complication and is common (Lloyd and White, 1982).

II- CHRONIC INCOMPLETE OBSTRUCTION

(1) Strictures:

Strictures are the result of surgical injury to the common bile duct during cholecystectomy in the majority of patients. Less often, the injury may occur during common bile exploration, gastric resection, or a pancreatic operation. A stricture may result from attempts to repair a previous bile duct injury or previous stricture. Rarely, strictures may occur without prior operation as a result of inflammation from pancreatitis, common bile duct stones, or sclerosing cholangitis, or spontaneously from a congenital stenosis that progresses to stricture (Hermann, 1975).

However, more than 90 percent of benign biliary strictures are related to previous operative trauma, the vast majority of these strictures occur secondary to cholecystectomy. The onset of jaundice in this group of patients in the 24 to 48 hours after cholecystectomy is a telltale sign. Alternatively, an external fistula may develop. In which case jaundice may be low grade or absent or may develop only when drainage from the fistula abates. As drainage from the fistula slows, chills and fever may develop. Less often, some patients present with intermittent chills, fever, and jaundice years after apparently uneventful cholecystectomy (Bolton et al., 1980).

Strictures, unless successfully corrected, this lesion will eventually kill the patient, though often not for a number of years. First, the partial biliary obstruction leads to relatively mild recurring attacks of cholangitis, with time the attacks become more severe and more frequent and the jaundice fails to disappear between the episodes of cholangitis. Eventually, the changes in the liver and the intrahepatic duct system become irreversible and progress through secondary sclerosing cholangitis, uncontrollable sepsis and intraductal stones formation to established biliary cirrhosis, portal hypertension and death from liver failure or haemorrhage (Smith , 1980).

Sclerosing cholangitis may be regarded as the classical example of chronic incomplete obstruction. Primary sclerosing cholangitis is a fibrosis of the wall of the lumen to the point of almost complete occlusion. The syndrome usually presents in the third to the fifth decade of life , with a male predominance in most series. The classical presentation is with jaundice often intermittent and mild, but sometimes progressive, non-specific upper abdominal discomfort and pruritis.

The history may range from months to years, and cholangitis may occur at a late stage in the course of the disease. The association with inflammatory bowel

disease is well known, and ulcerative colitis may be present in 20-30% of cases (Benjamin, 1982).

Although sclerosing cholangitis usually involves the common bile duct, localized intrahepatic involvement can be seen which may result in segmental obstruction (Howard, 1980).

The term sclerosing cholangitis is defined by Wellwood and Warren as a non-traumatic, non-malignant fibrosis occurring in the submucosal portions of the bile ducts and causing thickening of the walls with consequent narrowing of the lumina. There is generally little change in the external diameter of the ducts, and the clinical features are those of obstructive jaundice (Wellwood and Warren, 1981).

(2) Stenosed Biliary-Enteric Anastomosis:

Choledochoduodenostomy or choledochojejunostomy are used in the treatment of selected patients with retained recurrent and impacted bile duct stones; strictures of the bile ducts, stenosis of the sphincter of Oddi, pancreatitis associated with biliary disease, choledochal cyst, fistulas of the bile duct, and biliary obstruction either benign or malignant.