Recurrent Biliary tract stones

Essay Submitted for partial fullfilment

of master degree in general surgery

By

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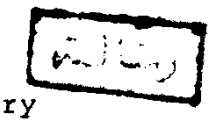
under supervision of



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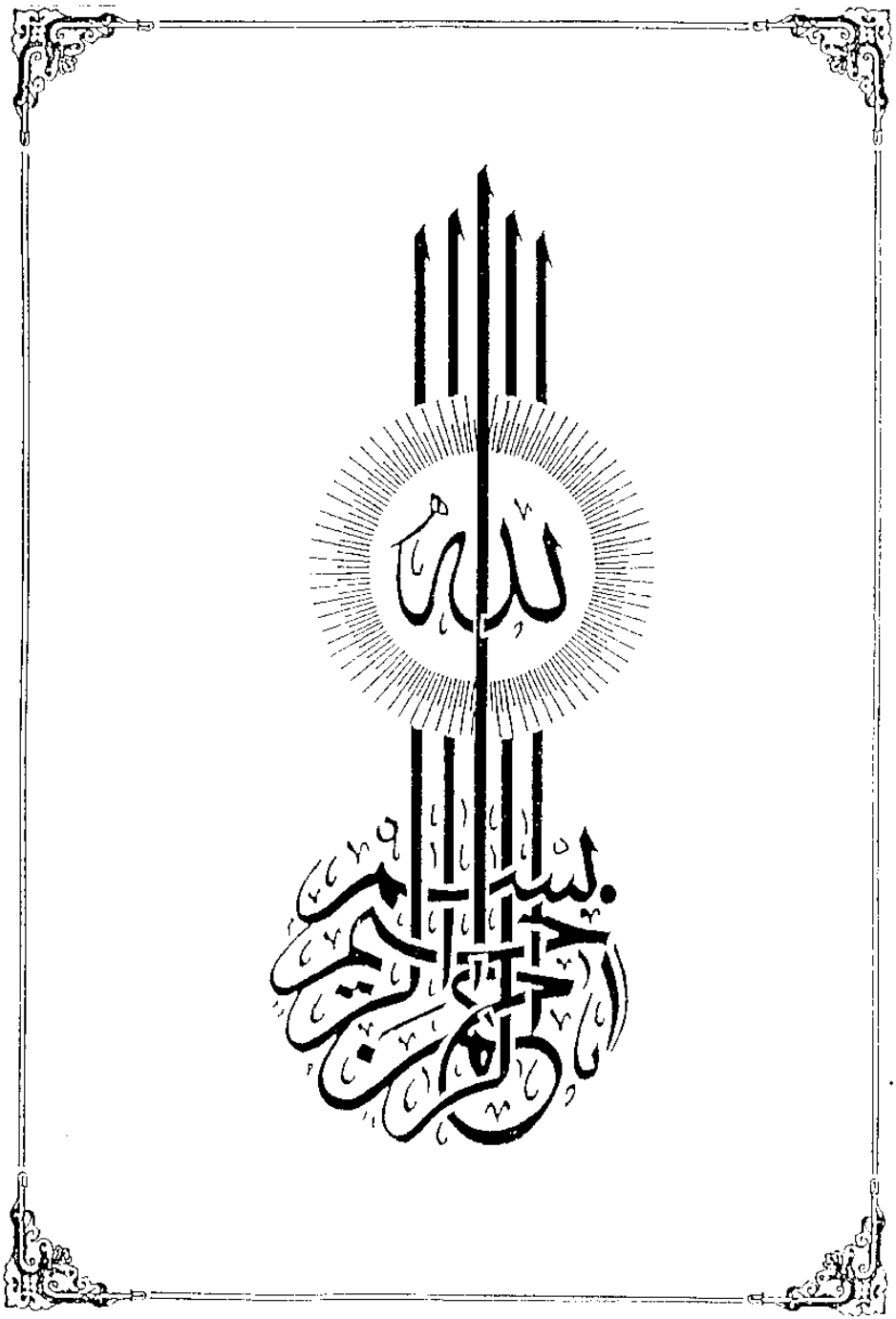

DEDICATION

TO THE MEMORY OF

MY FIRST TEACHER IN LIFE

MY FATHER

TOMY MOTHER

FOR HER LOVE, DEVOTION & PATIENCE

Recurrent Biliary Calwli

INTRODUCTION

INTRODUCTION

Recurrent choledocholithiasis remains a challenge for both the patient and the surgeon. Indeed, it appears likely that despite modern proeperative, intra operative and post operative techniques, it still holds true today that aportion of the patient 2-7 percent, sooner or later will require surgical treatment for recurrent choledo cholithiasis, as reported by moller and santavizas (1972). Moreover, after a second operation on the biliary tract, recurrence rates as high as 10 percent have been reported by kune and Burrhenne 1972 with even higher rates following subsequent reoperations. Even theuse of endoscopic papillotomy for the removal of residual or recurrent stones in the bile duct carries a residual rate for calculi of approximately 9percent, a mortality of 1.4 percent and morbidity rate of 7 percent, as indicated by Safarny 1978.

Demonstration of calculi in the ductal system of biliary tract in a person in whom thegall bladder has been removed in variably raises the question as to whether or not the calculi were overlooked at the time

of cholecys tectomy or whether they recurred sometimes there after as amanifestation or continuation of previous calculous disease of gallbladder.

Those patients who have had calculi removed from the common bile duct at the time of cholecystectomy seem more likely to develop recurrent calculi months or years later than those who have not had choledeholithiasis at the time of primary operation however most calculi that recur will probably be formed in the common bile duct or in some segment of the intra hepatic ductal system where stasis is present. In addition to these there is undoubtedly a group of patients who form calculi within the common bile duct because of metabolic distrubances (Frank Glenn 1981).

However aside from further discomfort to the patient and embarrassment to the surgeon, reexploration of the common bile duct is associated with a mortality that is twice that for the initial choledochotomy and four times that for an uncomplicated cholecys tectomy, as reported by sterling (1964) the present study was under taken to answer the question of if, and how, a side from the use of modern techniques, a supplementary

procedure to choledochotomy drainage could effectively reduce or even eliminate, the incdence of recurrent choledocholithiasis and the necessity of a second operation.

More over, an attempthas been made in this article to assess the value, the adequacy and the short and the long term result of two widely used and strongly debated drainage procedures that is choledcho duodenostomy versus sphin cteroplasty.

AETIOLOGY

RECURRENT BILIARY CALCULI

Aetiology:

Very littleis known about the factors that predispose to recurrence of gall stones, formed in common or intra hepatic bile ducts, in patients who have under gone cholecystectomy.

I. Duodenal diverticula:-

Several studies indicate a causal relation ship between duodenal diverticula and gall stone disease. The diverticula presist after biliary tract surgery, and it is there fore presumed that patients with diverticula have an increased disposition to develop new calculi in the bile ducts after cholecystectomy. Duodenal diverticula localized to the area of the papilla of vater are associated with a high incidence of gall stone disease. since the diverticula presist after cholecystectomy, one might expect an increased frequency of recurrent biliary calculi in these patients. The present study was designed to test the validity of this theory to test this hypothesis, the occurrence of recurrent biliary calculi was studied in 101 patients who had cholecystectomy, all with an

asymptomatic period of two years or more following the primary biliary surgery, All patients had symptoms, that indicated biliary tract or pancreatic diseases. The incidence of recurrent calculi in patients with diverticula was 87.5% (95% confidence interval, 66.9-95.8). In patients without diverticula, the incidence was 31.9% (95% confidence interval, 21.5-44.3) the difference is highly significant and the results support the assumption that diverticula in the area of the papilla of vater dispose togallstone disease. One hundred one patients entered the study between 1976 and 1980. They had all previously under gone cholecystectomy with or without common duct expolration, owing to gall stone disease. At least a two-year a symptomatic period had followed the biliary tract surgery. They were examined because of suspected biliary tract or pancreatic diseases. excluded from the study were patients with bilio intestinal anastomosis or shpincteroplasty. definitive diagnosis of neoplasms affecting the bile ducts or papilla of vater also led to exclusion. Carcinomas in these regions may impede the endoscopic diagnosis of diverticula and the ductographic visualization of proximal bileducts. Patients who had undergone gastric resection and

vagotomy were also excluded as these operations may dispose to gallstone formation. the patients formed two groups those with and those without diverticula in the area of the papilla of vater. Since duodenal diverticula are uncommon in younger age groups, only patients 60 years of age or older were included in the study. The two groups were comparable with regard to age, sex and time since cholecystectomy table 1.

The diagnosis of diverticula as well as recurrent biliary calculi was made by endoscopic retrograde cholangiopancreatography (ERCP). The examinations were performed according a standard procedure. The findings of the calculi were verified either by surgery or by repeated endoscopic examination followed by therapeutic endoscopic papillotomy.

Table 1. details of patients instudy.

	with diverticula	without diverticula
Number of patients	32	69
Sex	14M, 18F	20M, 49F
Age		
Median	73.0	71.0
95% confidence-		
interval	71.0 - 78.0	68.0 - 74.1
Range	66.0-86.0	60.0-87.0
Timesince cholecy-		
stectomy (years)	7.0	6.0
95% confidence-		
interval	5.4 - 11.6	5.0 - 11.0
Range	2.0 - 46.0	2.0 - 39.0

Table 2. recurrent biliary calculi in patients with and without diverticula

	with divertiula	without diverticula	total
with calculi	28	22	50
without calculi	4	47	51
total	32	69	101

Juxta papillary duodenal diverticula were found in 32 patients. The remaining 69 had no visible changes in the pqpillary area. Fifty of the 101 patients studied hadrecurrent biliary calculi. In the group with diverticula 28 of the 32 patients studied had calculi, where as 22 of 69 patients without diverticula had recurrent stones in the bile ducts. The difference is highly significant table 2. the calculated probability for recurrent calculi in patients with suspected biliary tract or pancreatic diseases who had previous cholecystectomies is 87.5% in patients with diverticula and 31.9% in patients without diverticula table 3. The findings in patients with diverticula but without calculi were normal intwo patients chronic pancreatitis in one and cirrhosis of liver inone. In patients without diverticula and no biliary calculi, the findings were normal in 37, suspected stenosis of the papilla in five, carcinomas inthe body of the pancreas in two, chronic pancreatitis in two, and pancreasdivisum in one.