CONCLUSION

Choledocholithiasis occurs in a variety of circumstances most frequently in patients with co-existing stones in the gall bladder , or as residual stones following cholecystectomy , it may also occur in stagnant bile as in papillary stenosis or proximal to benign common bile duct stricture . Common bile duct stones may remain asymptomatic for long periods of time , but acute pancreatitis , cholangitis and obstructive jaundice may develop .

The foundation of modern common bile duct exploration was laid by *Ludwig Courvoisier* in 1890 , with the first successful removal of common bile duct stones . For generations since this historical event , operative exploration of the common bile duct at the time of cholecystectomy has been considered the benchmark to which all other treatment modalities are compared .

The recent dramatic shift from open to laparoscopic cholecystectomy has stimulated a reappraisal of the approach to choledocholithiasis . For surgeons who perform laparoscopic cholecystectomy but not laparoscopic common bile duct exploration , preoperative diagnosis of choledocholithiasis is essential to schedule these patients for either the open technique or bile duct clearing E.R.C.P .

Accordingly , this work is a trial to evaluate the efficacy and safety of E.R.C.P and laparoscopic cholecystectomy in the management of

patients with chronic calcular cholecystitis and suspected choledocholithiasis .

Fifty patients with chronic calcular cholecystitis , 29 females and 21 males , with age ranging between 22 - 70 years (mean 45.46 ± 10 years) comprised the patients of the study . Suspected choledocholithiasis in these patients was a result of clinical , laboratory or ultra-sonographic data . Choledocholithiasis was either proved or discarded by E.R.C.P . Meanwhile , therapeutic stone extraction was attempted in the same session by dormia basket , lithotripsy or balloon extraction . Being sure that the common bile duct was clear of stones laparoscopic cholecystectomy was performed eventualy in a period ranging from two days to two weeks .

Classification of patients according to risk factors of choledocholithiasis into groups was done and the percent of actual verification of common bile duct stones (total 30 patients) was :

- Group A: Clinical jaundice (91.7%) .
- Group B: Gall stone pancreatitis (50%) .
- Group C: Elevated liver function tests & normal duct size (58.3%) .
- Group D: Stones seen in C.B.D by ultrasound (100%) .
- Group E: Elevated liver functions & dilated C.B.D by U/S (92.3%) .

After overcoming the different endoscopic difficulties encountered , common bile duct clearance was achieved in 25 out of 30 patients (83.3%) all the failed cases , 5patients (16.7%) were managed by open surgery . Complications to E.R.C.P (32 endoscopic sphincterotomies)

were : pancreatitis in two cases (6.25%) who were managed conservatively , cholangitis in three cases (9.4%) who were also managed conservatively and bleeding due to endoscopic sphincterotomy in three more patients (9.4%) with only one patient managed conservatively and the other two resorted to open surgery for arrest of beeding and also clearing the duct stones .

Comparative analysis of the diagnostic variables revealed that failure of E.R.C.P in achieving duct clearance was associated with significantly older age , more associated fever , higher total serum bilirubin & hypertension .

Laparoscopic cholecystectomy was planned for 46 patients in the study, as one of the failed five cases by E.R.C.P was actualy discovered postoperatively . Difficulties encountered were related to insufflation (4.3%) , dissection (10.8%) , bleeding control (4.3%) , spilled stones (6.5%) & gall bladder extraction (6.5%) . Conversion to open surgery was done in five patients (10.9%) due to : severe chronic adhesions with the gall bladder (6.5%) , empyema of the gall bladder (2.2%) & bleeding from the gall bladder bed (2.2%) .

Comparative analysis of the diagnostic variables revealed that failure of laparoscopic cholecystectomy was associated with significantly older age , higher total serum bilirubin , more associated fever , obesity , shistosomiasis and hypertension . Postoperative complications occured in the form of : wound infection (12.2%) , Atelectasis & pneumonia

(4.9%) , urinary retension (2.4%) , prolonged ileus (2.4%) , D.V.T (4.9%) , myocardial infarction (2.4%) & retained C.B.D stones (2.4%) .

From the results of this study it could be concluded that the combination of E.R.C.P and laparoscopic cholecystectomy in the management of suspected choledocholithiasis in patients with chronic calcular cholecystitis seems an adequate protocol whenever possible . Our success rate of 80% seems an encouraging outcome when compared to the open common bile duct exploration which still remains the gold standard therapy for proven cases of choledocholithiasis . Meanwhile , the reduction of postoperative hospital stay and earlier patients' return to the normal daily activities together with minimal invasion and tissue damage induced add more advantages to this protocol .