RECURRENT BILIARY SYMPTOMS IN CHOLEDOCHOLITHIASIS AFTER DUCT CLEARANCE WITH GALLBLADDER IN SITU

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INTRODUCTION

Preoperative endoscopic retrograde cholangiopancreatography (ERCP) for stone removal and elective cholecystectomy is indicated in patients with choledocholithiasis. The requirement and timing for elective cholecystectomy after ERCP in patients with common bile duct (CBD) stones and GB in situ are still controversial.

The purpose of this research is to

- identify **the risk factors** associated with recurrent biliary symptoms ;including pancreatitis, cholecystitis and cholangitis after ERCP complete clearing CBD stone
- identify **the optimal timing** for elective LC after ERCP complete clearing CBD stone

Study design : single-centered retrospective cohort study

MATERIAL &METHOD

INCLUSION CRITERIA

1.Diagnosis of CBDS by abdominal ultrasound, CT or MR cholangiopancreatography
2.ERCP for CBD stone removal and can complete clearing CBD stone
3.The following up data is complete

273 Patients

EXCLUSION CRITERIA

121Patients

- Congenital common bile duct cysts or bile duct abnormalities
- Bile duct tumors and periampullary cancer
- Intrahepatic bile duct stones
- Allergic to contrast agents

152 Patients

6 patients death :all are none hepatobiliary cause

146 patients

with CBD stone who underwent ERCP and complete clearing CBD stone from Jan 2019- Jan2024 at Bhumibol Adulyadej Hospital

35 (23.9%) patients
underwent elective cholecystectomy (LC/OC)

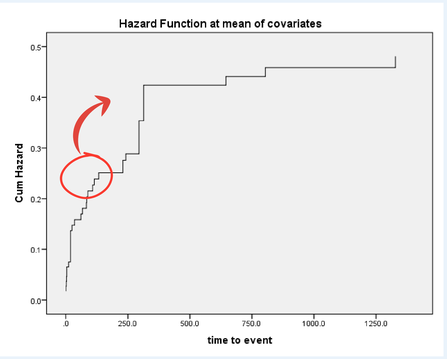
111(76.0%) patients
had Gallbladder in situ

- Asymptomatic 71 (64%)
- Symptomatic 40 (36%)

RESULT

Table 1: Multivariable analysis of the risk factors associated with recurrent biliary symptoms in patient with gallbladder insitu

Risk factors	Symptomatic (40)	Asymptomatic (71)	Odd ratio	95% CI	Adjust Odd	95%CI adjust odd
• Number of CBD stone (single: multiple)	9:31	56:15	12.86	5.0-32.8	12.5	3.6-43.9
• Difficult lithiasis	27 (58.7%)	5 (10.9%)	27.4	8.91-84.4	22.8	5.7-90.8
• CBD stone type(non-pigmented: pigmented)	5:35	3:68	0.309	0.07-1.36	-	-
• WBC> 10,000	10.30+/- 4.24	13.62+/- 8.64	2.82	1.27-6.28	-	-
• AST>40 U/L	34.3 +/- 37.77	93.99 +/- 155.79	6.14	2.47-15.25	-	-
• TB>1.2 mg/dL	2.19 +/- 2.94	5.43 +/- 5.74	4.98	2.12-11.69	-	-
• DB>0.3 mg/dL	1.79 +/- 2.60	4.72+/- 5.16	2.29	0.80-6.05	-	-



The survival analysis of recurrent biliary symptoms in patients with gallbladder in situ

- incidence of recurrent biliary symptoms started from **2.5%**
- at **186.6 +/- 81.5 days** and increased almost linearly thereafter.
- median survival time of recurrent biliary symptoms is **454 +/- 81.7 days**

CONCLUSION

THE RISK FACTORS ASSOCIATED WITH RECURRENT BILIARY SYMPTOMS(RBS)

We found only **2 independent risk factors** associated with RBS

- **The multiple CBD stone** (odd ratio 12.86, 95% CI 5.0-32.8)
- **Difficult lithiasis** (odd ratio 27.4, 95% CI 8.91-84.4)

**difficult lithiasis:CBD stone cases that cannot successfully managed with biliary sphincterotomy and one time stone extraction with balloon or basket catheters.

THE OPTIMAL TIME FOR ELECTIVE CHOLECYSTECTOMY

The optimal timing for elective cholecystectomy is ***around 6 months*** in patients with gallbladder in situ with an incidence of recurrent biliary symptoms of **2.5%** and increased rapidly afterwards.

While , the UK guidelines, American Society Gastrointestinal Endoscopy (ASGE) and European Society of Gastrointestinal Endoscopy (ESGE) recommend elective cholecystectomy in all CBDS patients **within** 2 weeks after removal of common duct stone due to higher conversion rate, higher recurrent biliary symptoms, longer hospital stay and operation time. We must, however, underline that there are several reasons for the decision to delay cholecystectomy including limited resources ,operating room time, economic restraints, surgeon's comfort and decision and patient's choice as well

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