ROLE OF ERCP;
IN ACUTE BILIARY PANCREATITIS: A LOCAL EXPERIENCE

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ABSTRACT… Objective: To determine the efficacy of ERCP in acute severe biliary pancreatitis in relation to rate of complications and hospital stay. **Patients and Methods:** 30 patents were included in the study, divided into ERCP group & Non ERCP group. The study was conducted at Surgical Unit-I, Holy Family Hospital Rawalpindi from July 2009 to April 2011. ERCP Group comprised of 11 patients and non ERCP Group 19 patients. All patients having severe acute biliary pancreatitis raised alkaline phosphatase and common bile duct diameter >8mm were included in the study. **Results:** In ERCP Group, there were 3 males and 4 females with mean age 42.77 ± 14 years. In non ERCP group there were 17 males and 2 females with mean age 46.76 ± 13 years. ERCP was done within 3 day in 8 patients and within 7 day in 5 patients in ERCP group. The rate of complications in both groups was insignificant (P= .92). The length of hospital stay also does not differ significantly between two groups (P=.874). **Conclusions:** In our set up there was no significant difference in outcome in ERCP and non-ERCP group of severe acute pancreatitis. However, in ERCP group intervention was mostly performed after 72hrs.

Key words: ERCP (Endoscopic retrograde cholangiopancreatography), Pancreatitis,

INTRODUCTION

The role of early endoscopic retrograde cholangio pancreatograph (ERCP) and endoscopic sphincterotomy (ES) in patients with acute pancreatitis is controversial[1,2].

Gall stones and alcohal are the main cause of acute pancreatitis, gallstones account for 34% to 54% of the 4.8 to 24.2 cases of acute biliary pancreatitis (ABP) per 100,000 people annually[3] ERCP within 72h of admission to hospital may improve outcome but this policy may aggravate the severity of the disease. However, the results of a number of clinical trails examining the role and potential benefits of ERCP and ES suggest that this policy in gallstone-associated pancreatitis is beneficial, and that clearance of gallstones from papilla or common bile duct can prevent exacer bation of the pancreatitis by persistent or recurrent impaction of stones[4]. Although little is known about the fundamental acinar cellular events that trigger acute pancreatitis in gallstone disease,

evidence is accumulating that intermittent or continous pancreatic ductal hypertension may induce acinar damage and initiate the pancreatitis[5]. This ductal hypertension may be caused by intermittent or continuous stone impaction in the papilla of Vater before the stone passage which may cause local edema.

Whether or not a bile influx in pancreatic duct is important has not been clearly elucidated[5] Since gallstone impaction, temporary obstruction of the papilla of Vater by stones and sludge passing through the papilla are thought to be responsible for permanent or intermittent pancreatic duct hypertension[6] and thus for induction or persistence of acute pancreatitis. An accurate and safe treatment of gallstone disease at the very beginning of biliary pancreatitis could interrupt an essential part of pathogenic mechanism an add to the healing and help to avoid severe pancreatic and biliary complications.

Hence a study conducted at surgical unit-I Holy Family Hospital, to determine the efficacy of ERCP, in relation to rate of complication and duration of hospital stay.

PATIENTS & METHODS
The study was conducted from July 2009 to April 2011 at Surgical Unit-I, Holy Family Hospital. ERCP was conducted at Gastroenterology Unit of Holy Family Hospital.

Inclusion Criteria
All patients presenting with Acute Biliary pancreatitis having:
(a)   Dilated common Bile Duct, detected on abdominal ultrasound (>8mm)
(b)   Raised level of Alkaline phosphatase.
(c)   Patient having severe pancreatitis.

Exclusion Criteria
In addition to normal sized CBD, normal level of alkaline phosphatase and patients of mild and moderate cases of acute pancreatitis, the following patients were also excluded.
(a)   Patients having A.S.A > II
(b)   Patient having co-morbid

Especially diabetes mellitus and CLD, affecting outcome of acute biliary pancreatitis.
All patients were admitted having basic monitoring facilities in High Dependency Unit, patients needing ventilator support were shifted to intensive care Unit. Acute Biliary Pancreatitis was managed by

(a)   Maintaining intake output balance.
(b)   Control of pain by Opioid Analgesics.
(c)   Injection Tienam 1gm intravenous, started eight hourly
(d)   Oxygen given via mask at rate of 11 liters/minute.
After stabilizing the patient, ERCP was performed at Gastroenterology unit, Holy Family Hospital.

In post ERCP period strict monitoring continued. Patients were divided randomly ERCP and non ERCP groups into. All the important data of both groups recorded on a proforma and statistical evaluation was done using Clin-square and t-tests. P value of less than 0.05 was considered as statistically significant, statistical software SPSS-11 was used for statistical analysis.

RESULTS
Group Characteristics:

Total number of study participants	30 (n=30)
(E.R.C.P Group) Male Females Mean age	3 8 42.77±14 years
(Non E.R.C.P / conservatively managed group) Males Females Mean age	17 2 46.76 ± 13 years

FINDINGS

Lab Findings	Normal		Raised		ERCP Findings	
	ERCP Group	Non ERCP Group	ERCP Group	Non ERCP Group	Findings	Frequency
Serum Bilirubin	6	11	7	6	Stones in CBD	6
Serum Amylase	3	1	8	16	Sludge	4
Serum ALP	1	4	11	9	Stricture	1
TLC	2	7	11	8	Failure	2
Post admission day on which ERCP was done	Within 3 day 8		Within 7 day 5		Total 13	

Group Characteristics	Levene's Test		Pearson's correlation
	F value	Significance	
Duration of symptoms	38.857	0.00	
Complication	0.795	0.381	0.09

Duration of symptoms had a statistically significant association with ERCP, whereas "RATE OF COMPLICATIONS WAS EQUAL IN BOTH GROUPS". Various complications noted in ERCP and Non ERCP group were:

Length of hospital stay does not differ significantly between the two groups. (p=.874)

Mean duration of hospital stay in days in ERCP group= 57.23 hours

Mean duration of hospital stay in days in Non ERCP group = 56.57 hours

DISCUSSION
Acute pancreatitis is a disease with a wide spectrum of etiologies, including casuistic toxins and viruses, congenital mal formations and different vascular pathologies. However, with the exception of areas with a high prevalence of alcohol abuse, " Biliary is the most common form of acute pancreatitis in the majority of countries[7,8,9].

Unfortunately, since its inception as a clinical entilty in 1889 and despite more than a century of research, the treatment of acute pancreatitis, regardless of its cause, remains mainly supportive[10]. A ray of hope rose in the 1980s with the introduction of ERCP and ES in routine clinical practice as it had the potential of being a pathogenetic treatment in patients with the gallstone etiology of acute pancreatitis. Nevertheless, despite two decades of clinical studies, the early use of this endoscopic intervention in patients with acute biliary pancreatitis is still a notoriously controversial issue.

In first study[1], it was shown the patients with predicted severe pancreatitis had fewer complications if they underwent ERCP within 72 h(24% VS 61%, P<0.01).

Another study[11] a rate of complications (8% VS 78%, P<.001) were found in another study12 when ERCP was performed within 48 hrs of onset of symptoms.

However in a study which was supplementary to Folsch etal[13] patients with signs of obstruction (main bile duct diameter $\geq$ 8mm and total serum bilirubin $\geq$ 1.20mg/dl) without cholangitis, to urgent ERCP within 72 hrs after the onset of the attack or to conservative treatment. Incidence of complications were similar in both groups with predicted severe pancreatitis.

In our study also rate of complications were similar in ERCP and non ERCP (conservative group) P= .92. Similarly the length of hospital stay did not differ significantly (p = .84). However in ERCP group, only 8 patients had ERCP within 72 hrs whereas remaining had within 7 days. So there was delay in intervention. Despite lack of conformity in results of various studies, UK guidelines, as well as Tokyo guidelines advocate urgent therapeutic ERCP in every patient with suspected gallstone etiology and predicted severe pancreatitis or when there is cholangitis, jaundice and dilated common bile duct[14].

CONCLUSIONS
In our study, there was no clear cut benefit demonstrated in ERCP group compared to non ERCP group for patients of acute biliary pancreatitis though international recommendations still favour early ERCP in severe biliary pancreatitis. However in our study, there was delay in intervention in ERCP group.

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" The best things in life are

unexpected

because there were no

expectations.

Eli Khamarov