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ACUTE BILIARY PANCREATITIS- DIAGNOSIS AND MANAGEMENT

Surgery

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Introduction-

Acute pancreatitis is sudden inflammation of the pancreas. It ranges from a mild, self-limiting disease to severe life-threatening disease. Its incidence increasing worldwide has been reported [1]. Gall stone is commonest cause for acute pancreatitis [2, 3]. The disease has equal incidence in both the sexes [4]. Clinically characterized by sudden onset of abdominal pain mainly epigastric region radiating to back, vomiting, and often mild jaundice [1]. Disease is classified into mild, moderate and sever. Mild form is 80% and self-limiting, 20% has sever form [5, 6]. The diagnosis of acute biliary pancreatitis can be done by raised serum amylase and serum lipase level, raised liver enzyme and ultrasonography [7, 8]. CT abdomen is used for severity of pancreatitis and its gold standard. Majority of cases of acute biliary pancreatitis resolve with conservative line of management without complication. The common complications are necrosis, pseudocyst formation, abscesses, hemorrhage and systemic complication are pleural effusion, adult respiratory distress syndrome, renal insufficiency, and multiorgan failure [9.10].the management of acute biliary pancreatitis was depend on severity of pancreatitis. Mild form of pancreatitis is managed conservatively and severe form of pancreatitis may need ERCP and some cases may require surgical management. This study was carried out to evaluate the prevalence, presentation, management and outcome of acute biliary pancreatitis cases.

Material and Methods:

- Study area- Bharati Hospital and research center.
- Study population- All diagnosed case of Acute Pancreatitis in Bharati Hospital & Research Center included in the study.
- Period of study- August 2015 – August 2017.
- Type of study: Retrospective study.

From 96 consecutive patients diagnosed as acute pancreatitis during study period were included in the study. 23 patients diagnosed to have acute biliary pancreatitis were further studied par the methodology. All patients above 18yrs of age were included in the study. Age, sex, history, family history, other co-morbid conditions were documented at presentation. Biochemical examination, routine examination of blood, blood sugar, urea, serum creatinine, serum amylase and lipase, serum LDH, serum calcium, liver function test were done for all patients. Radiological investigations like chest X-Ray, X-ray erect abdomen, USG abdomen to all patients and CECT of abdomen was carried out to selective patients depending on severity of patients. Patients were classified according to Ranson's criteria and this was used for subsequent management of patient disease. The treatment plan was focused on adequate initial resuscitation and supportive care, early detection of complication and definitive treatment of associated biliary disease. Cholecystectomy was done during same hospital stay for some patient. ERCP was done as and above required.The collected data will be coded and entered in Microsoft Excel sheet. The data was analysed using SPSS (Statistical Package for social sciences) version 20.0 software.

Observation and result-

In my study, a total of 96 diagnosed cases of acute pancreatitis were admitted, Out these, 23 cases (23.95 %) had been diagnosed as acute biliary pancreatitis.

Table no 1. Distribution of patients according to age group (*N*=23)

Age	Number of cases	Percentage
18-30	2	8.6
31-40	4	17.3
41-50	9	39.13
51-60	4	17.39
61-70	3	13.04
>-71	1	4

Age of patient ranging from 27yrs-80yrs, the mean age of the study population was 49± 6 years. The most frequent age group was 40–50 years which comprised 39.13 % of the cases (Table 1). Out the 23 cases, 13 (56.52 %) were female patients and 10(43.47%) were male patient.

Table no 2. Associated Co-morbidity- (n-7)

Co-morbidity	Number of patient	Percentage
Diabetes	3	13.04
Hypertension	2	8.6
Diabetes with hypertension	2	8.6

On admission, 7(30.43%) cases had associated co-morbidity.

Table no 3. Distribution of the patients according to symptoms and signs (N = 23)

Symptom	Number of cases	Percentage
Pain in abdomen	23	100
Vomiting	23	100
Fever	9	39.13
Jaundice	14	60.86

The most common symptom at presentation was pain in abdomen, mainly in epigastric region (100 %), followed by vomiting (100 %), jaundice (60.86 %) and fever (39.13%).

Table no 4. Distribution of the patient according to biochemical finding (n-23)

Biochemical finding	Number of cases	Percentage
Raised Serum amylase	23	100
Raised Serum lipase	23	100
Raised Serum bilirubin	18	78.26
Raised Alkaline phosphate	12	52.17
Raised CRP	4	17.39

All 23(100%) patient had raised serum amylase and serum lipase, 18 (78.26%) patient had raised serum bilirubin, 12(52.17%) patient had raised alkaline phosphate and 4(17.39%) patient had raised CRP.

Diagnosis in my study was made on the basis of clinical presentations, serum amylase, serum lipase, serum bilirubin and ultrasonography. Computerized tomography (CT) scan of abdomen with contrast was done for patient (n-8) who had severe form of acute biliary pancreatitis. Table no 5. Distribution of patients according to the severity of acute pancreatitis (N = 23)

Grading	Number of patient	Percentage
Severe(Ranson's score >3)	8	34.78
Mild (Ranson's score<3)	15	65.21

Severity assessment of the patients was done using the Ranson's score 15 (73.91 %) patient were mild pancreatitis and 8 (26 %) patients had severe pancreatitis.

In our study, CT scan had done in 8 patients (34.78 %) in which 16 (94 %) had a Balthazard's CT severity index of four or more.

Table no 6. Distribution of patients according to the management (N = 23)

Management	Number of patient	Percentage
Conservative + index cholecystectomy	8	34.78
Conservative + cholecystectomy	7	30.43
ERCP	1	4.3
ERCP + Cholecystectomy	7	34.78

Out of 23 patients, 15 (65.21 %) patient were treated with conservative management. In this 15 patient, 7 (30.43%) patient underwent index cholecystectomy. 7(34.78%) patient underwent ERCP and interval cholecystectomy and 1(4.3%) patient underwent ERCP.

Table no 7. Distribution of Complication-

Complication	Number of patient	Percentage
Pleural effusion	13	60.8
Pseudocyst	3	13.04
Acute renal failure	4	17.3
Multi-organ failure	1	4.3

13(60.8%) patient had pleural effusion, 3(13.04%) patient had pancreatic pseudocyst, 4(17.3%) patient had acute renal failure and 1(4.3%) patient had multi-organ failure as complication

Table no 8. Outcome of the study participants (N - 23)

Outcome of patient	Number of patient	Percentage
Improvement without complication	9	39.13
Improvement with complication	13	60.8
Mortality	1	4.3

In our series of 23 patients, mortality was seen in only 1 (4.3%) patient. 9 (39.13 %) patients had an uneventful recovery without any complications. 13 (60.8 %) patients developed some forms of complications but recovered successfully.

The mean duration of hospital stay was about 12 days, but it ranged from 8 to 25 days.

Discussion-

Acute biliary pancreatitis accounted for about 23.95% of the cases of acute pancreatitis who presented to us during the study period. This incidence was similar to that reported by Choudhury et al [11]. Acute biliary pancreatitis is major cause for acute pancreatitis [12, 13, 14]

The mean age of 49years reported in our study, was also similar to the study by Choudhry et al [11]. Incidence of Acute biliary pancreatitis in our study shows slight more prevalence to female [56.52%] than male. The most common symptom in this study was abdominal pain (100 %) and vomiting (100%), followed by jaundice (60.86%) and fever (39.13%). Abdominal pain mainly in epigastric region, radiating to back and worsens when the patient in supine position is the major symptom of acute pancreatitis [11, 15]. None of these patients had a history of alcohol intake. 30.43% patient had associated co-morbidities.

Biochemical finding in our study showed raised serum amylase [100%] and serum lipase [100%]. Serum bilirubin raised in 78.26% patients and serum alkaline phosphate was raised in 52.17% patients [16, 17]

Ultrasonography showed pancreatic swelling, cholelithiasis with or with cholecystitis, dilated common bile duct with stone and in some passed out stone in common bile duct [18].

The diagnosis in this study was made on the basis of clinical presentation, a raised serum amylase, lipase, and ultrasonography [19]. A CT scan for the confirmation of the diagnosis, however, could not be done in all cases as some patients could not afford the cost of the investigation. Computerized tomography scan was done on patient (n-8) who had severe form of acute biliary pancreatitis.

All 23 cases were assessed and severity graded according to the Ranson's Criteria in order to determine the prognosis and treatment plan.15 (73.91 %) patient had mild pancreatitis and 8 (26 %) patients were had severe pancreatitis in this study. In this study, CT scan was done in 8 patients (34.78 %) in which 16 (94 %) had a Balthazard's CT severity index of four or more.

According to severity of pancreatitis, 65.21% [n-15] patient had mild pancreatitis and treated conservatively with adequate hydration, bowel rest, analgesic and in some cases antibiotics. Out of 15 patient, 7 patient underwent index cholecystectomy. 34.8% [n-8] patient had underwent ERCP within 72hrs of admission [19]. Out of 8 patients, 7 patients underwent interval cholecystectomy. One patient had mortality due to multi organ failure. The advantage of doing ERCP in 72hrs, it reduces the severity of complication and hospital stay.

The complication in this study, 13(60.8%) patient had pleural effusion and managed conservatively. 3(13.04%) patient had pancreatic pseudocyst, 2 patient were managed conservatively and one patient was managed with ERCP. 4(17.3%) patient had acute renal injury and managed conservatively.1(4.3%) patient had mortality due to multi-organ failure.

In this study of 23 patients, mortality was seen in only 1 (4.3%) patient. 9 (39.13 %) patients had an uneventful recovery without any complications. 13 (60.8 %) patients developed some forms of complications but recovered successfully.

The mean duration of hospital stay was about 12 days, but it ranged from 8 to 25 days.

The limitation of our study was its retrospective design and limited in both the extent and the type of information available for each patient's hospitalization. We acknowledge our limitation of not being able to do a detailed imaging in all of our patients as some of our patients could not afford more expensive investigations such as a CT scan. As a result, the diagnosis of acute biliary pancreatitis had to be made based on the clinical presentation and suggestive investigations in some cases. Hence, in order to validate our findings, further appropriately designed researches are recommended.

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