ORIGINAL ARTICLE

Management of Acute Pancreatitis at Shalamar Hospital: A two year audit

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ABSTRACT

Aim: To audit all the patients admitted in Shalamar Hospital with a diagnosis of acute pancreatitis.
Methods: All patients admitted in Shalamar Hospital with a diagnosis of Acute Pancreatitis from Oct 2012 to Oct 2014 were included in the study. All patients were studied for their cause of pancreatitis, development of complications, laboratory parameters, admission in ICU and development of complications.
Results: In a period of two years a total of 30 patients were admitted with a diagnosis of pancreatitis. 13 were males (43%) and 17 females (57%). The mean age was 46.4 years. Most common etiology was gall stones in 57%. The median length of hospital stay was 6.87 days. 20% of the patients had a diagnosis of severe pancreatitis and required admission in an ICU. There were no mortalities in our study. 40 % patients suffered from minor or major complications. 5 patients had ARDS, 2 patients developed a pseudocyst and 3 patients developed necrosis. One drain placement, two laparotomies with necrosectomy and 2 ERCPs were done. 6 patients underwent cholecystectomy during the same admission.
Conclusion: Pancreatitis is a disease with very serious complications. Strict adherence to management guidelines can help reduce morbidity and mortality.
Keywords: Acute pancreatitis, pancreatic complications, audit, cholecystectomy

INTRODUCION

Acute pancreatitis although not a very common surgical emergency accounts for significant amount of mortalities on the surgical floor[1]. Incidence varies from 4.5 to 79.8 per 100,000 per year in different countries[1]. Exact figures for Pakistan are yet to be calculated but there is evidence of high mortality from this disease in Pakistan[2,3]. Its etiology includes gall stones, alcohol, hyperlipidemia, viral infections and trauma. It can also be idiopathic[1,3]. Acute pancreatitis follows a very variable course from mild asymptomatic disease to one of multi-organ failure and death[4].

A lot of guidelines have been developed to manage this condition[5-8]. Strict adherence to these protocols has been shown to cause a marked decrease in morbidity and mortality from its complications. However following these guidelines is a problem[7]. An insight into the current practices and techniques followed by us on the surgical floor is necessary to increase our understanding of the disease and compare our protocols with the recommendations.

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The purpose of this study is an audit of the patients presenting with a diagnosis of acute pancreatitis at Shalimar Hospital and Medical College, Lahore during the past two years. We want to compare our data with that from international literature.

METHODOLOGY

The medical records of all patients admitted to the Shalamar Hospital with a diagnosis of acute pancreatitis from 1st Nov 2012 to 31st Oct 2014 were reviewed. Patients demographics and other variables were recorded. Etiology, final outcome and any procedure if performed such as endoscopic retrograde cholangiopancreatography (ERCP), or cholecystectomy, were also recorded. Admissions into ICU were also noted. All data were then analyzed

RESULTS

In a period of two years a total of 30 patients were admitted with a diagnosis of pancreatitis. 13 patients were males (43%) and 17 females (57%). The mean age was 46.4 years (range 22-80 years). The etiology of the acute pancreatitis was gall stones in 57%, hyperlipidemia induced in 10%, ERCP induced in 7% and unkown in 26.7% of patients (fig 1).

Fig 1: Etiology of the cases presenting with acute pancreatitis
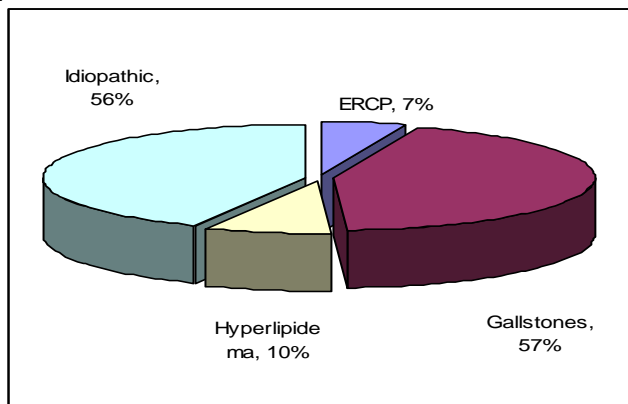
Most common complaint of patients coming to emergency was pain epigastrium (100%) followed by vomiting (40%). Abdominal tenderness was the most common sign. 7 patients had pleural effusion. 5 patients had anemia clinically. 2 patients were jaundiced. Fever was present in only one patient (Table 1).

Table 1: Clinical signs of patients

Clinical Signs	n	%
Abdominal Tenderness	30	100
Vomiting	12	60
Pleural effusion	3	21
Anemia	5	15
Jaundice	2	6

Table 2: Demographics and Laboratory Parameters

	Mean	Min	Max	Std. Dev.
Age	46.40	22	80	13.818
Stay	6.87	1	15	4.041
Hb	12.441	9.3	18.2	1.994
TLC	9.834	4.7	17.8	3.088
Plt	287.448	65	889	147.719
Hct	39.100	30.5	56.8	5.971
BSR	126.714	55.0	309	85.636
Amylase	285.684	22.0	1989	448.081
Lipase	731.650	30.0	3580	1039.364
LDH	665.500	27.0	1304	902.975
AST	49.256	9.9	293	57.932
Calcium	7.771	5.6	8.8	1.046

The median length of hospital stay was 6.87 days (range 1–15). The diagnosis of acute pancreatitis was confirmed by amylase and lipase assays. Mean amylase levels were 285 and mean lipase levels at admission were 731. Details of all the lab parameters can be seen in Table 2. 20% of the patients had a diagnosis of severe pancreatitis and required admission in an ICU. There were no mortalities in our study.
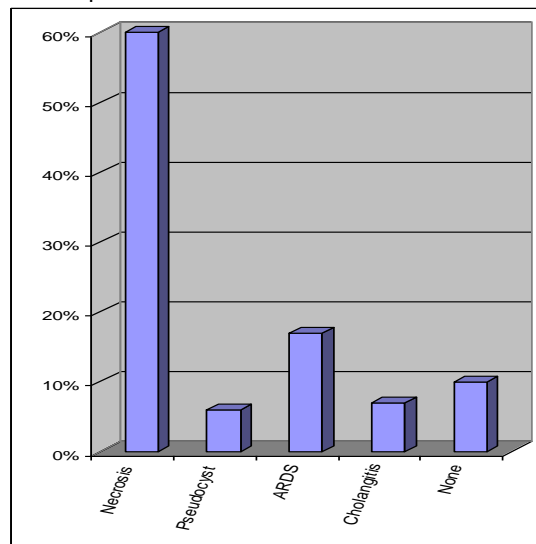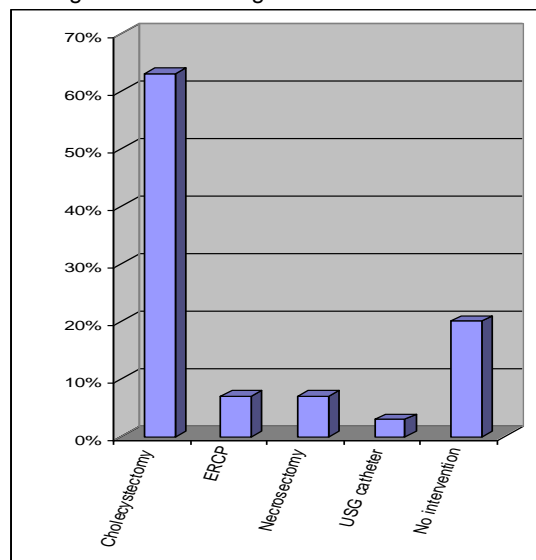
Fig 2: Complications

Fig 3: Surgical and non surgical interventions

Forty percent patients suffered from minor or major complications (Fig 2). Five patients had ARDS which was managed conservatively. 2 patients developed a pseudocyst which resolved spontaneously. Three patient developed necrosis. One of those was managed with ultrasound guided drainage and the other 2 required laparotomy and necrosectomy. Two patients had a cholangitis and required urgent ERCP. Four patients underwent laparoscopic cholecystectomy and 2 underwent open cholecystectomy during the same admission (Fig 3).

DISCUSSION

Acute pancreatitis is an abdominal emergency with catastrophic complications[1-3]. Despite recent advances in this field the mortality remains high. Over

the past few decades there has been considerable re-evaluation in the management of severe acute pancreatitis[10-13]. It is mandatory however to identify patients at risk and manage them in an ICU setup. For this various screening tools have been used such as Ranson's score and Apache II score. Although APACHE II score is more reliable we still use Ranson's criteria for stratifying our patients. 6 patients (20%) in our study required admission in ICU[5,6]. As per recommendations these patients were admitted to ICU from day 1 and not on the basis of clinical deterioration. The accepted mortality rate for patients with severe pancreatitis is 30% and overall is 10%[1,4]. Fortunately we had no mortality in our series. This can be attributed to the fact that we had only a few patients with severe pancreatitis and our overall sample size is also very small to be of any significance.

The most common cause in our population for pancreatitis was gall stones followed by hyperlipidemia. Alcohol induced pancreatitis was absent which is different from the west where alcohol is the main cause. In 27% of our patients we couldn't identify the cause of pancreatitis. This figure should have been lowered as it is of utmost importance that we identify the cause in all patients. But despite best efforts even in international studies a rate of 20% idiopathic pancreatitis is acceptable[1,4,11].

All patients had their diagnoses made on the basis of their serum amylase or lipase levels which correlate with other studies[14,15]. 8 patients had below normal value of calcium. TLC levels were raised in 60% of the patients. However antibiotics were prescribed to all the patients. Although indicated in severe pancreatitis there is no role of antibiotics in mild cases. This practice needs to be revised.

Two patients had to undergo ERCP during admission. The ERCPs were normal and without complications. These 2 patients are different from those which were admitted because of post ERCP pancreatitis. Only 6 patients underwent cholecystectomy. This number is small as the current recommendation is to perform same admission or early cholecystectomy[16,17]. This means that 11 remaining patients had to undergo a readmission to get their gall bladders removed. Three patients developed pancreatic necrosis. One patient was managed with ultrasound guided drain placement and 2 had to undergo exploratory laparotomy. Our mean hospital stay of all patients was 7 days. It was 5 days for mild pancreatitis and 15 days for severe pancreatitis.

CONCLUSION

Acute pancreatitis is a dangerous disease. Strict adherence to guidelines and protocols can help significantly reduce morbidity and mortality related to the disease.

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