

Management Of Acute Pancreatitis: An Outcome Study

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Citation

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Abstract

Objective: Acute pancreatitis (AP) is usually a self-limiting disease caused by gallstones, alcohol, hyperlipidemia, or sometimes of unknown cause. However, it may progress to multiple organ failure due to the initiation of inflammatory mediators that have local and systemic effects. Our retrospective study designed to highlight the treatment and outcome of AP at a university hospital.

Methods: This is retrospective study of patients who were diagnosed as AP and treated at King Khalid University Hospital (KKUH) over the past 11 yr from 1990-2001. Data were analyzed to determine the etiology, severity of the disease and outcome of treatment.

Results: We reported 164 episodes of AP in 131 patients (74 females), 16 recurrence in females (21.6%) and 17 in males (29.82%). This showed the increase recurrence rate among males which most probably was due to alcoholic abuse. Gallstones are the most common cause 60.3% (74.3% in females) followed by idiopathic causes 24.42%. Clinically, AP was mild to moderate in 80.9% and severe in 19.1%, which is very close to the results of other studies. Complications were seen as pseudo-pancreatic cyst in 14 cases (4 females), infected cysts or pancreatic abscess in 9 cases (6 females), respiratory complication in 5 cases (4 females), shock in 1 case and mortality in 1 case.

Conclusion: AP is not an uncommon disease in Saudi Arabia and most of the time present to KKUH in its mild form where gallstones are the most common cause with low mortality rate. Our results are in accordance with other results from different countries.

INTRODUCTION

AP is non-bacterial inflammatory disease that results from intra pancreatic activation, release and digestion of the organ by its own enzymes. Although the majority of attacks are mild and patient recover within a week, about 10% of cases are severe and may be complicated by infection or multi-system organ failure and death₁.

AP usually begins with pain in the upper abdomen that may last for few days, the pain is often severe, it may be constant just in the abdomen or it may reach to the back and other areas. The pain may be sudden and intense, it may begin as mild pain that is aggravated by eating and slowly grows worse. The abdomen may be swollen and very tender. Other symptoms may include nausea, vomiting, fever and tachycardia. The patient often feels and looks very sick₁.

50,000 – 80,000 cases of AP occur in the United States each year (17-30 per 10,000 population)₁. Also 10-50 per 100,000

populations per year occurs in Europe_{2,3,4}, but very few reports came from Middle East. This study carried out to describe the profile as well as the outcome of AP at KKUH in Saudi Arabia.

MATERIAL AND METHODS

Retrospective study for 131 patients (74 females) admitted and treated to KKUH over a period of 11 years from 1990-2001. The diagnosis of AP was based on clinical signs and symptoms, serum amylase >1000_{5,6}, and somogyi unit. Other parameters considered in the study were age, sex and the diagnosis if it is acute or relapsing AP and using Ranson's criteria_{7,8,9} for prognosis as well as the patient follow-up and recurrence rate.

RESULTS

The total number of patients was 131 (74 female), age ranging between 13-90 years with mean age of 46 yr. Total AP episodes were 164 in 131 patients (131 acute and 33

relapsing AP). The etiology of AP was in 60.3% due to biliary causes (74.32% for female and 42.1% for male), 5.3% due to alcohol intake (12.28% for male), 3.05% post-operatively (4% female and 10.75% male), 6.87% hyperlipidemia (4% female and 10.52% male), 24.42% idiopathic (17.56% female and 33.3% male) and one case for tuberculosis (Table 1, Figure 1).

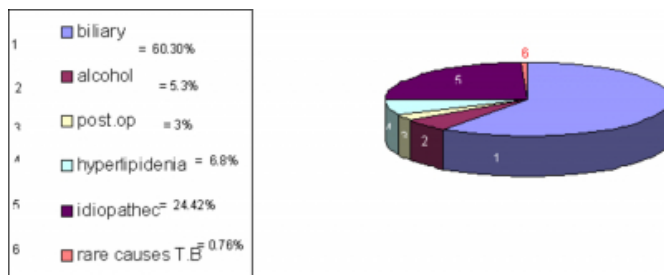
Figure 1

Table 1: Etiology of AP.

Etiology	F (%)	M (%)	TOTAL (%)
Biliary	74.3 %	42.12 %	60.3 %
Alcohol	0 %	12.2 %	5.3 %
Postop	4 %	1.75 %	3.05 %
Hyperlipidemia	4 %	10.52 %	6.87 %
Idiopathic	17.56 %	33.3 %	24.42 %
Rare causes TB	0 %	0.76 %	0.76 %

Figure 2

Figure 1: Percentage of etiology of acute pancreatitis (Percentage)



Assessment of the severity of the disease according to Ranson's criteria we found that 80.9% mild to moderate AP (78.94% for male and 82.4% for female) and in 19.1% sever AP (21.16% for male and 17.6% for female) (Table 2).

Figure 3

Table 2: Prognostic score (RANSON'S) in females (F) and males (M) patients.

Score (no.)	F	M	Total
0	18	22	40
1	14	21	35
2	13	18	31
3	5	8	13
4	5	2	7
5	2	3	5

Conservative supportive treatment by intravenous fluids, analgesics, electrolytes correction and antibiotics was used for all patients followed by ERCP for 16 cases (12.21%) and

drainage guided by ultrasound or CT scan for 5 cases (3.8%) due to pancreatic pseudocyst and laparotomy in 8 cases (6.1%) due to abscess or infected pancreatic pseudocyst.

We reported shock in 1 female patient who was admitted and treated in ICU and was improved. Six patients developed respiratory complication (7.86%), infection seen in 9 cases (11.79%), one of them has HIV positive and colonic stricture seen in 2 cases (2.62%). Pancreatic pseudocyst and abscesses was reported in 13 cases (17.03%), and one mortality in 88 yr old male patient (Table 3).

Figure 4

Table 3: Outcome of AP in females (F) and males (M) patients.

Complication	F	M	TOTAL
Shock	1	0	1
Respiratory	4	1	5
Hypocalcemia	0	0	0
Infection (infected cyst or abscess)	6	3	9
Colonic stricture	1	1	2
Pancreatic pseudocyst	4	10	14
Death	0	1	1

Follow-up cholecystectomy was done for most of the cases. Follow-up in 6 months to 5 years revealed 33 recurrence cases, most of them due to idiopathic or alcoholic pancreatitis with one patient who was readmitted 4 times with recurrence (Table 4).

Figure 5

Table 4: Recurrence rate in females (F) and Males (M) patients.

No. of recurrence	F	M	TOTAL
1	14	9	23
2	1	5	6
3	0	1	1
4	1	2	3

DISCUSSION

AP is not uncommon disease. We can face it as a serious emergency from time to time which requires immediate investigation and treatment for better outcome.

In the present report we found that AP is more common in females and can affect all ages and the most common cause was gallstones 60.3%. Our result is close to the results from the other reports from Saudi Arabia and other countries worldwide^{5,10,12}. The second most common cause was idiopathic (24.42%) followed by hyperlipidemia (6.87%).

Alcohol intake as a cause was 0% in females and 12.2% in males patients and this result is very much related to the culture and religion in Saudi Arabia.

Conservative supportive treatment was successful in most of the cases and minimally invasive procedure (aspiration of pancreatic cyst guided U/S or CT) or laparotomy needed in <10% of the patients^{13*14*15*16*17*18*}

One important point in our management of AP if compared with other reports is the minimal use of CT scan in diagnosis and follow-up unless there is complication and this was not affecting management of our cases since we are using it in selective cases and not as a routine^{19*20*21}

It was effective to follow Ranson's criteria in the assessment of the severity of the disease on admission. In our study, 80.9% of the cases were mild to moderate AP and 19.1% severe, which was similar to other reports^{1,4,5}.

In conclusion, AP is a serious disease if diagnosed early and treated adequately, the results will be satisfactory keeping in mind severe cases which scored >3 Ranson's should receive special care with possibility of high complication rate¹³. Cholelithiasis was the most common cause, followed by idiopathic then hyperlipidemia. Alcohol intake was a rare cause of acute pancreatitis.

CONCLUSION

We believe that immediate diagnosis and proper treatment of AP can lead to better outcomes.

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