

“A STUDY ON CLINICAL AND DIAGNOSTIC PROFILE OF NON ALCOHOLIC PANCREATITIS IN ADULTS COMING TO GENERAL SURGERY DEPARTMENT IN TERTIARY CARE CENTER”

General Surgery

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ABSTRACT

Aim

- To study the various etiological factors for pancreatitis except alcohol
- To evaluate the clinical profile in a patients with non alcoholic pancreatitis
- To study the various scores in non alcoholic pancreatitis and its outcome

Study Design Descriptive study to find the various causative factors in non alcoholic pancreatitis in adults coming to gen surgery OPD and casualty in TVMCH. All the study population were subjected to detailed history, clinical examination, radiological imaging, serum biomarkers to find out various etiologies **Study Population And Period** Patients attending general surgery opd and casualty with features of acute pancreatitis excluding alcoholic pancreatitis **Prospective study** of sample size 73 with inclusion criteria was involved in this study **Duration** 2 years

Inclusion Criteria

- All known cases of non alcoholic pancreatitis
- Age >13 years
- Patients with clinical features of abdominal pain, evaluated and diagnosed as pancreatitis

Exclusion Criteria

- Alcoholic patients with features of acute pancreatitis
- Age <13 years
- Patients who were not willing to follow up

Results Pancreatitis show varying morbidity and mortality especially the severe necrotizing type. Mortality will be even more if there is bacterial contamination. Severe form of the disease may have a lesser mortality if diagnosed and treated early. In our study pancreatitis predicting scores BISAP, HAPS and CTSI were analysed to predict the severity of pancreatitis. Simpler and easily available parameters containing scores and markers were taken for the study. **Conclusion** Initial assessment of HAPS Score, BISAP Score and BALTHAZAR Score could be reliable indicators of outcome in acute pancreatitis

KEYWORDS

Acute Pancreatitis, Bedside Index for Severity in Acute Pancreatitis, Harmless Acute Pancreatitis Score, Balthazar.

INTRODUCTION

Acute pancreatitis is most commonly caused by gallstones. About half of all UK cases of acute pancreatitis are Gallstone-related, while about 25% of all cases of acute pancreatitis are alcohol-related. Studies in the UK and Europe have shown that gallstone pancreatitis incidence is linearly increasing. Comparatively to European studies, the frequency of alcohol-induced pancreatitis in the UK is lower. Men in their middle age are more likely to suffer from alcohol-induced acute pancreatitis. Men and women are equally likely to suffer from idiopathic acute pancreatitis (20-34% of cases). A clinician's ability to determine a patient's etiology of acute pancreatitis will determine the incidence of idiopathic acute pancreatitis. Obtaining an idiopathic diagnosis of acute pancreatitis has become less difficult with the advancement of laboratory pathology tests and radiologic imaging techniques. Women over 60 are more likely than men to develop gallstone-related acute pancreatitis resulting from gallstones. Gallstone pancreatitis is thought to occur more frequently in patients with gallstones smaller than 5 mm or microlithiasis. Obstruction of Sphincter of oddi leads to reflux of secretion and injures pancreatic duct. Various theories suggested in pathogenesis of pancreatitis and remains controversial

OBJECTIVES

- To study the various etiological factors for pancreatitis except alcohol
- To evaluate the clinical profile in a patients with non alcoholic pancreatitis
 - To study the various scores in non alcoholic pancreatitis and its outcome

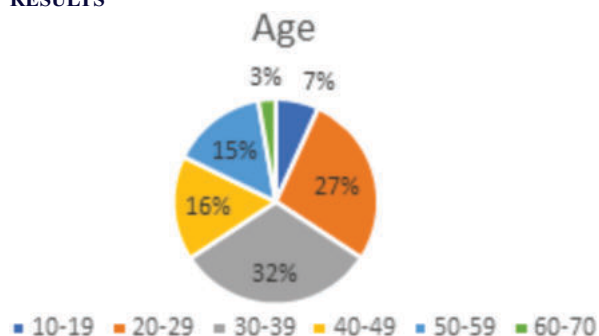
MATERIALS & METHODS

A total of 73 patients of acute pancreatitis were enrolled in the study based on the inclusion criteria and the set of exclusion. The exclusion of other patients is given in Figure below

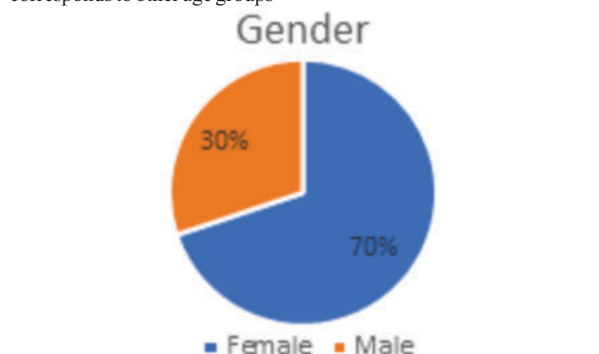
METHODS

- Socio-demographic**
 - Selected socio-demographic, clinical and laboratory data were elicited from these patients and recorded in a proforma
- Socio-demographic data**
 - Age
 - Sex
- Clinical data**
 - Clinical history was elicited in detail with special emphasis on abdominal pain, abdominal distention, decreased urine output, vomiting, blood vomitus, blackish stool, breathlessness, chest discomfort, swelling of legs, fever, yellowish discoloration of eyes or urine and substance abuse (alcohol and smoking)
 - Blood pressure, Pulse rate, Temperature, Respiratory rate, Oxygen saturation in peripheral blood (SpO2) was measured using standard procedures.
- Clinical examination** was done with special attention for abdominal guarding, rebound tenderness, impaired mental status, respiratory system for breath sounds
- Laboratory data**
 - Hematocrit: Estimated by 5 part cell counter (Pentra ES 60, Japan)
 - Serum Amylase: Estimation was done by kinetic colorimetric method (Spin React, Spain)
 - Liver Function Tests, Blood urea, Serum creatinine, Blood Glucose, Serum Triglycerides, Serum Calcium : Estimation was done using COBAS autoanalyzer
- Computerised Tomography**: was done using Toshiba Aquilion 64 (Japan)

RESULTS



Most of the patients were fall in the age group of 30 to 39 years, the prevalence of the non alcoholic pancreatitis between the age group of 30-39 years was 32% and 20-29 years was 27% and the rest corresponds to other age groups



The gender wise distribution shows most of the patients were females(70%) and males were about 30%

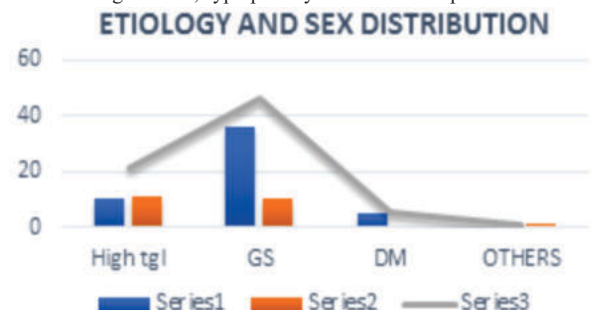
Symptoms

Symptoms	Yes	No	Percentage
Abdomen Pain	73	0	100.00
Fever	33	40	45.21
Vomiting	54	19	73.97
Jaundice	6	67	8.22

The clinical feature is variable and abdominal pain is present in all cases, along with abdominal pain 45% presented with fever, 73% with vomiting and 8% with jaundice

Etiology	Sex		Grand Total
	Female	Male	
High TGL	10	11	21
GS	36	10	46
DM	5	0	5
OTHERS	0	1	1
Grand Total	51	22	73
Chi-Square = 10.951			
Degrees of Freedom = 3			
p = 0.0119941			

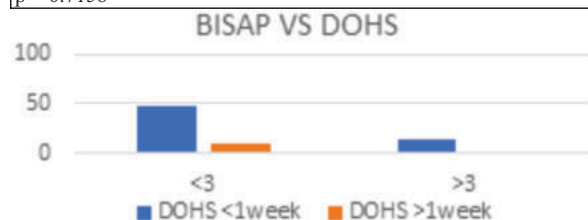
In this study gall stones was the most common cause for acute pancreatitis 63%, hypertriglyceridemia induced in 29%, others 8% which includes drug induced, hyperparathyroidism and idiopathic



Among gall stone pancreatitis most of them were females 49.13%, hypertriglyceridemia induced in 13.5% in both male and female, others like diabetes, hyperparathyroidism, drug induced and idiopathic seen in remaining 8% of study population

Bisap Vs Duration Of Hospital Stay

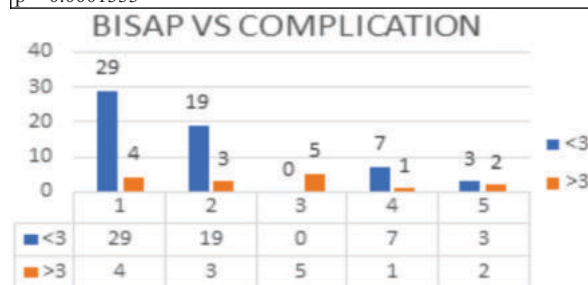
BISAP	DOHS		Grand Total
	<1week	>1week	
<3	48	10	58
>3	13	2	15
Grand Total	61	12	73
Chi-Square = 0.132511			
Degrees of Freedom = 1			
p = 0.7158			



BISAP score shows no significance in predicting the duration of hospital stay with p value of p=0.7158

Bisap Vs Complication

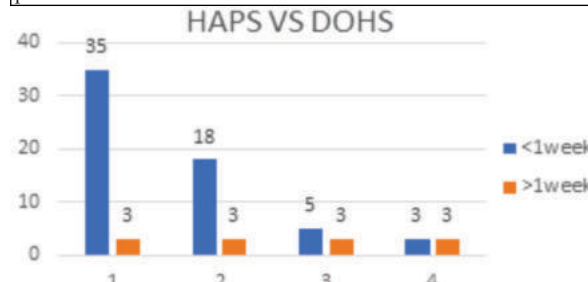
BISAP	Complications					Grand Total
	1	2	3	4	5	
<3	29	19	0	7	3	58
>3	4	3	5	1	2	15
Grand Total	33	22	5	8	5	73
Chi-Square = 22.8887						
Degrees of Freedom = 4						
p = 0.0001333						



BISAP score shows significant value p=0.0001333 in predicting the mortality of non alcoholic pancreatitis

HAPS VS DOHS

HAPS	DOHS		Grand Total
	<1week	>1week	
1	35	3	38
2	18	3	21
3	5	3	8
4	3	3	6
Grand Total	61	12	73
Chi-Square = 9.59373			
Degrees of Freedom = 3			
p = 0.02235			

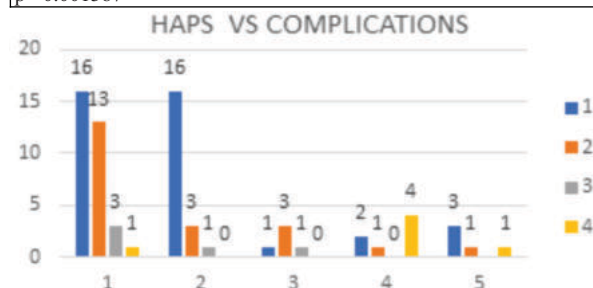


HAPS score is Harmless acute pancreatitis score which can be assessed easily and shows significance in predicting duration of hospital stay (p=0.02235)

HAPS VS Complications

HAPS	Complications					Grand Total
	1	2	3	4	5	

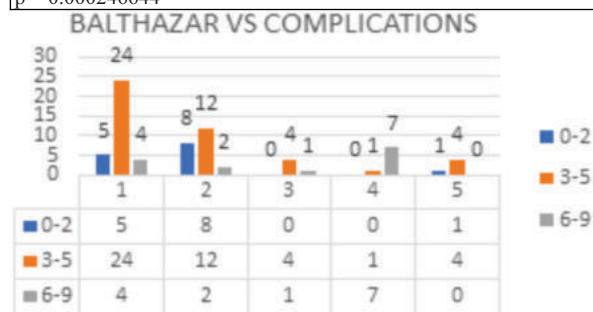
1	16	16	1	2	3	22
2	13	3	3	1	1	23
3	3	3	1	1	0	22
4	1	0	0	4	1	6
Grand Total	33	22	5	8	5	73
Chi-Square = 31.9933						
Degrees of Freedom = 12						
p = 0.001387						



HAPS shows very high significance ($p=0.001$) in predicting complication

Balthazar Vs Complications

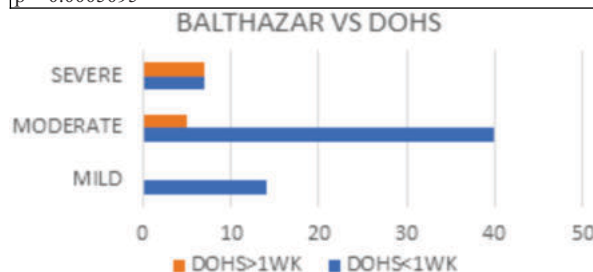
Balthazar	Complications					Grand Total
0-2	5	8	0	0	1	14
3-5	24	12	4	1	4	45
6-9	4	2	1	7	0	14
Grand Total	33	22	5	8	5	73
Chi-Square = 29.6204						
Degrees of Freedom = 8						
p = 0.000246644						



BALTHAZAR score shows very high significance in predicting complications $p=0.0002$

BALTHAZAR VS DOHS

Balthazar	DOHS		Grand Total
	<1week	>1week	
1-3	14	0	43
4-6	40	5	22
7-9	7	7	8
Grand Total	61	12	73
Chi-Square = 15.164			
Degrees of Freedom = 2			
p = 0.0005095			



BALTHAZAR score shows significance in predicting the duration of hospital stay of the patient

DISCUSSION

Unlike chronic pancreatitis, acute pancreatitis has no or little fibrosis in the pancreas the attack resolves, the symptomatic person usually

returns to a healthy state. There are close to a quarter of million hospital admissions due to this health problem in the United States each year. More than 300,000 cases of pancreatitis are reported each year in the United States, with 15 to 20% of them being severe, causing more than 3000 deaths. Pancreatitis also contributes to more than 4000 deaths annually, excluding deaths resulting from other causes. A lack of predictability in the natural history of the disease and delayed diagnosis lead to ineffective interventions. Obtaining a patient's prognosis on admission is an extremely important strategy, because then we can develop guidelines for standardizing management, such as when to administer antibiotics, when to conduct computed tomography scans, and when to use surgical intervention. As a result, outcomes will improve.

The severity and mortality of pancreatitis can vary, especially when the condition is severe and necrotizing. If there is bacterial contamination, the mortality will be even higher. Early diagnosis and treatment of the severe form of the disease may reduce mortality. The prevalence of mild and severe forms is still unacceptably high, despite the availability of scoring systems like Ranson's criteria, APACHE II scores, and Glasgow scores as well as radiological scoring systems, such as CTSI/Balthazar scores.

As part of our study, BISAP, HAPS, and BALTHAZAR scores were examined for predicting pancreatitis severity. Study parameters included easier to obtain scores and markers that were simple and easily available. For management of cases, the simplest and most economical of the scores would be of great assistance due to resource constraints.

CONCLUSION

Acute pancreatitis is an acute inflammation of the pancreas with varied genesis of other regional tissues or remote. Prompt detection and early management of initial phases of pancreatitis and predicting scores enable us to devise some standardisation in treating the pancreatitis at the time of admission itself to improve the desirable outcome. This finding has encouraged various research organisations to do investigations to discover which clinical, pharmacological, or radiologic characteristics could be utilised to identify people who are likely to develop a serious illness.

Following conclusions were made from the results and outcomes obtained by our study

- Non alcoholic pancreatitis is more common in females between 20-39 years
- Most common presentation was abdominal pain with vomiting in more than half of patients.
- With regard to prognosis 20% had severe pancreatitis and remaining 80% was having mild to moderate pancreatitis and most of them were affected by biliary stones
- Duration of hospital stay, complication and mortality rates were predicted using different scoring systems
- All the three scores used in our system showed equal efficacy in predicting the complication
- BALTHAZAR and HAPS scores showed very significant association with predicting the duration of hospital stay.
- HAPS score is very simple in calculation with available bedside serum markers and clinical findings which showed good results.

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