

## **Clinical Study of Demographic Profile, Etiology, Severity and Outcome of Acute Pancreatitis in a Tertiary Care Teaching Hospital in Northern India**

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### **Extended Abstract**

#### **Abstract**

Acute Pancreatitis (AP) is the inflammation of the pancreas varying from parenchymal oedema to necrosis caused by auto-digestion of the gland by its enzymes with significant potential morbidity and mortality. Due to lack of prevalence data only the incidence from the patients admitted in different tertiary care centres all over the country can be obtained. Despite large geographical differences, the incidence of AP has been increasing globally and the actual figures are mainly based on retrospective analyses of hospital admissions. Netherlands and the United Kingdom (UK) have been associated with lowest incidence, while the highest incidence occurs in Scandinavia and the US. Currently, supportive care is the mainstay of management of AP due to lack of specific pharmacotherapy.

Gallstones and alcohol, account for up to 80% of cases of AP, but other factors too play role in causation in the absence of these etiological factors. Demographics of the patient have a well-defined role in AP and it is found to be affecting different age groups variably across the globe. The clinical course of the disease is variable among various age gatherings. The etiology, severity as well as the outcome of the disease varies considerably with demographics of the patients and prevalence of the risk factors in different parts of the world. In some regions there's association between the prevalence of risk factors and therefore the refore the disease while in other regions such relation between the danger factors and the disease is lacking. The age of the patients at the onset of disease can't be generalized and neither can we definitely predict the sort of the disease severity at different ages in several sexes.

#### **Keywords**

Acute pancreatitis, Etiology, Gallstones, Trauma, Alcohol, Severity

#### **Department Materials and Methods**

This prospective cohort study was conducted between December 2016 to December 2017 with a sample size of 50 consecutive cases admitted in the department of general surgery in a tertiary care hospital in northern India with all newly diagnosed cases of acute pancreatitis admitted within the surgery department with age  $\geq 16$  years and no past history of AP were included within the study. The demographics of every patient were recorded i.e. age, sex, address, occupation, legal status, BMI, habits etc. an in depth clinical history was obtained from each patient and thorough clinical examination was done to determine clinical diagnosis of the condition. Laboratory investigations like serum amylase, lipase, BUN, blood glucose, serum triglycerides, serum calcium, TLC etc.were done and all the values analyzed and recorded. USG and X-rays were done in each case as the first radiological investigations and thereafter CT SCAN was done. Diagnosis of acute pancreatitis was established based on revised Atlanta classification, which includes fulfilling two of the following three criteria: Acute onset, severe abdominal pain consistent with acute pancreatitis; three folds increase in serum amylase or serum lipase levels of upper limit of normal; radiological investigations i.e. USG or CT SCAN or MRI showing evidence of acute pancreatitis. BISAP score was wont to determine severity of the pancreatitis as first rating system. Patients with score of  $\geq 3$  were delegated being having serious sickness while patients with score of  $<3$  were classified as being having mild form of the disease. CTSI (CT Severity Index) score was calculated with Balthazar grading and necrosis score using NCCT and CECT abdomen findings. Cases with CTSI score of  $<7$  were classified as mild and those with score of  $\geq 7$  were classified as severe. Outcome of the cases was recorded in terms of successful discharge, referral for any intervention elsewhere, LAMA (Left against Medical Advice), and death. All the data was statistically analyzed using descriptive statistics including mean, standard deviation, median,range etc. with the help of Microsoft Excel 2016 (v16.0).

### **Discussion**

Acute Pancreatitis (AP) is a relatively common disease with incidence of 5-80 per 100,000 members of the population worldwide. Although, its prevalence varies in different countries and even in different areas of a given country, there has been a significant increase in the number of new cases in recent years. Early analysis and brief treatment is the backbone of the treatment in AP for fundamentally diminishing dismalmess and mortality. AP can affect both males and females with variable frequency. In our study we found AP affecting. 70% Patients in our study were found to be females and 30% were males (M:F=0.4:1) showing a female predominance which is in contrary to the studies done earlier. However, compared to other Indian studies with majority of cases of biliary AP as done by Pawan et al, our study has yielded different results with female predominance in our study compared to male predominance in their study, which indicates demographics vary considerably within the same country in different regions. Results of some of the studies compared to present study are summarized.

### **Conclusion**

AP is more common among females with gallstones as leading cause in both male and feminine. Males are more prone to get severe disease with advancing age compared to females. Gallstones also are likely to cause AP in alcoholics then alcohol alone. Smoking is associated with more severe form of the disease. Mortality is low with 4% observed in current study.