



## A STUDY ON ROLE OF URINARY TRYPSINOGEN-2 IN DIAGNOSIS OF ACUTE PANCREATITIS

### General Medicine

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### ABSTRACT

**BACKGROUND:** Acute pancreatitis accounts for up to 5% of the patients presenting to the emergency department with abdominal pain. It is an inflammatory disease and it manifest with broad clinical spectrum varying from mild self limiting to severe form, such as pancreatic necrosis, multi organ failure and death. Early diagnosis and treatment of acute pancreatitis is critical in reducing the morbidity and mortality of the patients. Goal of this study is to throw light on urinary trypsinogen-2 as novel marker for diagnosis of acute pancreatitis.

### KEYWORDS

#### OBJECTIVES:

- To test for urinary trypsinogen-2 in CE-CT abdomen proven cases of acute Pancreatitis
- To compare with the serum amylase and lipase in diagnosing acute pancreatitis.

#### MATERIALS & MEATHODS:

100 CE-CT proven cases of acute pancreatitis admitted in Gandhi medical College.

#### INCLUSION CRITERIA:

Patients >16 years of age with CE-CT abdomen proven cases of acute pancreatitis.

#### EXCLUSION CRITERIA:

- Age less than 16 yrs.
- Pregnant women
- Acute on chronic pancreatitis
- History of prior biliary surgery
- Gastro intestinal tumors
- Renal compromise

#### RESULTS:

Total of 100 cases of Acute Pancreatitis were evaluated in the present study. In this present study most common age group was 26-35 years. Incidence was most common in males 92%. Most of the patients in this study were consuming alcohol 88%. Alcohol was the most common etiological factor in 85% patients and it was the most common etiological factor for both males and female.

Urinary trypsinogen – 2 strip test was positive in 97% patients, and sensitivity was 97% and positive likelihood ratio was 0.97.

Amylase was elevated in 86% patients, sensitivity was 86% and positive likelihood ratio was 0.86.

Lipase was elevated in 88% patients, sensitivity was 88% and positive likelihood ratio was 0.88.

**Table : Sensitivity, Positive Likelihood Ratio And Positive Predictive Values Of Urinary Trypsinogen – 2, Serum Amylase And Serum Lipase.**

	UT 2	AMYLASE	LIPASE
Sensitivity	97%	86%	88%
Positive Likelihood Ratio	0.97	0.86	0.88
Positive Predictive Value	100%	100%	100%

#### SUMMARY :

This study was aimed to study the role of urinary trypsinogen – 2 strip test for diagnosis of acute pancreatitis.

The study was done on the 100 CE-CT abdomen proved cases of acute pancreatitis, who are admitted in Gandhi hospital, with in the study period November 2016 to May 2018.

- Incidence in this study was highest 36% in age group belongs to 26 – 35 years.

- Incidence was rare only 2% after the 55 years of age.
- In this study most of the patients 88% were consuming alcohol.
- Alcohol was the most common 85% etiologic cause found in this present study.
- Alcohol was the most common cause in both male & female patients.
- In non – alcoholic patients of this study, most common etiologic factor found was gall stones and auto-immunity.
- Hereditary cause SPINK – 1 gene mutation was found in one out of 100 cases.
- Auto immunity was the cause for acute pancreatitis in two out of 100 cases. Most common complication was ascites.
- Urinary trypsinogen – 2 strip test was found positive in 97% of the patients.
- Serum amylase was found to be elevated in 86% of the acute pancreatitis cases of this present study.
- Serum lipase was found to be elevated in 88% of the acute pancreatitis patients of this present study.
- USG – abdomen was suggestive of acute pancreatitis in 91% of the patients of this present study.
- Urinary trypsinogen - 2 strip test got high sensitivity 97% compared with serum amylase (86%) and serum lipase (88%). So it can be used as screening test for acute pancreatitis.

#### CONCLUSION:

Urinary trypsinogen – 2 strip test got highest sensitivity and positive likelihood ratio compared with serum amylase & serum lipase, so it can be used as screening test for diagnosis of Acute pancreatitis in patients coming to emergency department with symptoms and signs suggestive of Acute Pancreatitis.

Urine Trypsinogen-2 dip stick test is a simple, rapid, easy, and non-invasive test which can diagnose or rule out, most of the cases of acute pancreatitis.

Its estimation doesn't require laboratory facilities.

It is undertaken almost instantaneously (within 5 minutes) as opposed to serum amylase and lipase, results for which may require an hour to get back to the physician.

The urinary trypsinogen-2 test could be used as a screening test for acute pancreatitis.

- Modification of the cutoff point of this assay increases the specificity to the point where it can be used for diagnosis. And hence it has been shown to be a reliable and useful screening test for acute pancreatitis in daily practice, particularly in healthcare units lacking laboratory facilities

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