

## TO PREDICT THE VASCULAR COMPLICATIONS IN PSUEDOCYST OR IN ACUTE NECROTISING PANCREATITIS – BASED ON TRYPSIN FLUID ANALYSIS – A PILOT STUDY

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**Background :** Arterial hemorrhage may occur in up to 10% of patients with pancreatic pseudocysts/ANP more ominous is the direct erosion of significant vessel by the action of pancreatic enzymes especially elastase on vessel wall and can lead to thinning of vessel wall with aneurysm and pseudo aneurysm formation ,this situation has a high mortality 20%. Enzymatic activity in the pseudocyst or in the necrotic issue have been attributed to cause vascular complications in these patients especially the trypsin and elastase activity . Till date there is no study done to prove the activity of trypsin or elastase in the pseudocyst or necrotic tissue causing vascular complication

**Methods :** – In the present study group of 29 patients of whom 22 patients had vascular complications is psuedocysts or in acute necrotising pancreatitis and 7 patients with normal uncomplicated pseudocysts who were treated at our institute over a period of 26 months from nov 2019– dec 2021 . Trypsin activity using N $\alpha$ -Benzoyl-L-arginine ethyl ester (BAEE) as the substrate. The procedure is a continuous spectrophotometric rate determination (A253, Light path = 1 cm) based on the following reaction: BAEE + H<sub>2</sub>O+ Trypsin  $\rightarrow$  N $\alpha$ -Benzoyl-L-arginine + ethanol

**Results :** – Trysin activity in psuedocystic fluid or in cases with WOPN was measured and was compared to uncomplicated psuedocysts . The mean trypsin activity was 85.26 (+\_ SD85.91) in the 22 complicated cases, and 5.94 in uncomplicated cases ( +\_ SD3.24 ) , the mean difference was 79.313 ,the p value by t test is 0.001

**Conclusions :** : Criteria for non operative management have been less established till date in history. The present study may guide to reduce morbidity and mortality in cases with vascular complications both in acute and chronic pancreatitis and which cases to be intervened early to prevent the vascular complications based on fluid trypsin levels

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