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JUNIL FOR RESERRES	Original Research Paper	Gastroenterology			
International	A STUDY ON THE IMPACT OF EARLY ENTERAL FEEDING IN ACUTE PANCREATITIS				
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ABSTRACT Aim of the study: The research study was designed to recognize the impact of early enteral feeding in the management and outcome of acute pancreatitis.					
KEYWORDS : Pancreatitis, severity, early enteral Nutrition					
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INTRODUCTION:

Acute pancreatitis is a common cause of acute abdominal pain requiring hospital admission. The severity varies from mild to severe form of pancreatitis with variable morbidity and mortality. Nutritional support is a prime importance especially for those with severe acute pancreatitis. Gut barrier damage in the early face of pancreatitis has been established as the cause for SIRS, sepsis and infection. Hence timing of enteral nutrition is critical for patient with acute severe pancreatitis. Several trials have found that early enteral nutrition was better at maintaining the gut barrier and decreasing bacterial translocation. In our institution, Thanjavur Medical College Hospital, we took up this study to evaluate the impact of early enteral feeding in the management and outcome of acute pancreatitis

MATERIALS AND METHODS:

This study was conducted in 54 patients of acute pancreatitis admitted in Thanjavur medical college hospital between September 2017 and September 2018. 54 cases of acute pancreatitis admitted, evaluated and managed as per protocols. The patients were managed conservatively or surgically and findings were recorded in proforma. The proforma was designed to record the history, complaints of the patients, past history, personal history, family history, diet history, alcohol consumption, obstetric and menstrual history, clinical examination, investigations and management. The clinical presentation associated medical condition, laboratory and radiological investigations, severity, management and outcomes were studied.

Early enteral feeding was defined as starting oral feeds within 72 hours of admission. Several patients were started on early enteral feeding while few patients had delayed enteral feeding due to various purposes like vomiting, abdominal distension and intolerability to enteral feeding. The episode of pancreatitis was categorized based on severity using clinical examination and radiological investigations and those with severe pancreatitis were admitted in ICU and monitored. All patients had full blood count, serum amylase, serum lipase, CRP estimation. Ultrasound abdomen, OGD scopy and CT abdomen were performed in all cases. All patients were treated conservatively initially with intravenous fluids and Proton pump inhibitors. Enteral feeding was started after 24 hours of admission. Those who tolerated oral fluids were continued on enteral feeding, and those who did not tolerate oral fluids were kept nil oral for 3 days.

RESULTS AND DISCUSSION:

In the study of 54 cases of acute pancreatitis the following observations were made.

SEVERITY OF PANCREATITIS:

Pancreatitis was graded according to the revised Atlanta classification into mild moderate and severe depending upon the presence or absence of multi organ dysfunction syndrome and local complications. Majority of the pancreatitis were mild (74%) compared to moderate (16.66%) and severe (9.25%) forms.

Revised Atlanta grading	Number of patients	Percentage (%)
Mild	40	74.07 %
Moderate	9	16.66 %
Severe	5	9.25 %

Revised Atlanta Grading



Enteral Feeding:

Enteral feeding was initiated after 24 hours of admission in 44 patients. Some patients who had gross abdominal distension and paralytic ileus (10 cases) were not tried on early enteral feeding. In 6 cases, for whom early enteral feeding was started, was withdrawn due to vomiting and increase in abdominal distension. 38 patients were started on early enteral feeding and tolerated it well.

Early enteral feeding:

Early enteral feeding	No of patients	Percentage
Started and tolerated	38	70.37 %
Started and withdrawn	6	11.11 %
Delayed enteral feeding	10	18.51 %

Early enteral feeding



Management:

51 patients were managed conservatively with adequate fluid replacement, electrolyte correction and adequate analgesia. 5 patients who had multi organ dysfunction syndrome were also managed conservatively with hemodialysis for renal failure, ventilator for respiratory failure, inotropic support for circulatory failure and neurological management for altered sensorium.

2 patients with infected pseudocyst were managed with ultrasound guided catheter drainage.

1 patient who developed severe sepsis had to be operated and necrosectomy was done. There was no mortality in our series

Management	No of patients	Percentage (%)
Conservative	51	94.44 %
Radiological intervention	2	3.70 %
Surgical intervention	1	1.85 %

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Management



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Follow up and complications:

In our study, 12 patients developed complications. Acute fluid collection – 4 patients Pseudocyst – 5 patients Pleural effusion – 2 patients Necrotizing pancreatitis – 1 patient

Follow up and Complications



develop any local / systemic complications. Out of the 16 patients for whom enteral feeding was delayed, 12 patients developed complications. Persistent pain and duration of hospital stay were longer in the delayed enteral feeding group. Radiological intervention, organ support and surgical intervention were needed in the delayed enteral feeding group.

Parameters	Early enteral	Delayed enteral
Persistent nain > 5 days	8 (21.05 %)	16 (100%)
Hospital stay > 10 days	6 (15 78 %)	16 (100%)
Padialagical intervention	0 (13.70 %)	10(100%)
	INII NII	2 (12.5%)
	NII	12 (75%)
Surgical intervention	Nil	1 (6.25%)
MODS	Nil	5 (31.25)



CONCLUSION:

The research study was designed to recognize the impact of early enteral feeding in the management and outcome acute pancreatitis in Indian patients. This study was conducted in 54 patients of acute pancreatitis who were admitted in Thanjavur medical college during the period of September 2017 to September 2018. 54 cases of acute pancreatitis were admitted, investigated and treated. Early enteral feeding was tried in almost all patients, but was not feasible in certain patients. 38 patients were started on early enteral feeding. 16 patients had delayed enteral feeding due to various reasons like vomiting, abdominal distension and intolerability to enteral feeding. Observations were made with regards to symptoms, clinical findings, complications, duration of hospital stay. Alcohol was the most common cause of pancreatitis in our study and majority of the patients were male. Patients who were started on early enteral feeding were observed to have early recovery, less complications and had early discharge compared to the group with delayed enteral feeding. Patients with delayed enteral feeding had higher incidence of complications like infected pancreatic necrosis, sepsis and need for laparotomy. The higher incidence of complications in patients with delayed enteral feeding may also be due to the severity of pancreatitis in this group.

Our study revealed that early enteral nutrition is of definite advantage in patients with mild and moderate pancreatitis, and patients for whom enteral feeding needs to be delayed have a higher rate of pancreatitis related complications and prolonged hospital stay.

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