



CLINICOPATHOLOGICAL STUDY OF SMALL BOWEL PERFORATIONS IN NORTH COASTAL ANDHRA

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ABSTRACT

- Small bowel perforations are one of the most common abdominal surgical emergency . The aim of the study is to review and study patients who have small bowel perforation. To analyze the clinicopathological relations of small bowel perforation in north coastal andhra to understand various causes in geographic variations. This study is a prospective clinicopathological study. 60 patients presenting with features of small bowel perforation were studied. A detailed history was noted in all the patients. Patients underwent both routine and radiological investigations. For pathological analysis, biopsy was taken from the perforation were sent. Co-relation was made between pathological reports and clinical presentation of patients.
- Most patients were males in the age group of 31-40 years. Perforation of the duodenum was most commonly found in all the cases studied. Abdominal pain and distension was found. Guarding and rigidity were present in 70% of cases . On histopathological examination, duodenal perforation was most commonly due to chronic inflammation.
 - Small bowel perforation commonly presents in middle-aged male working as laborers. Commonly presents with abdominal pain , vomiting, abdominal distension, fever, and constipation are chief complaints. pallor, dehydration, and features of shock were evident. Tenderness, abdominal guarding and rigidity, absent/sluggish bowel sounds were usually found on examination. Air under the diaphragm on erect x-ray abdomen was diagnostic. The pathological analysis was done Chronic inflammation was the most common non-traumatic cause of duodenal perforation and nonspecific inflammation in ileal perforation found on HPE. Early resuscitation and exploratory laparotomy is the treatment.

KEYWORDS : small bowel perforation, abdominal pain, distension, guarding , duodenal perforation, chronic inflammation, Exploratory laparotomy.

INTRODUCTION

- Small bowel perforation is one of the most common abdominal surgical emergencies encountered in casualty. Small Bowel Perforation is a perforation in the small intestine wall anywhere, starting from the duodenum to ileum. It leads to spillage of contents of small bowel into the Peritoneal cavity, causing peritonitis. It is a very acute condition that leads to septic shock and multiorgan dysfunction syndrome; hence it needs to be treated as early as possible. Small bowel Perforations are common in this region (north coastal Andhra), predominantly rural areas

Late presentation results in diagnostic and treatment challenges.

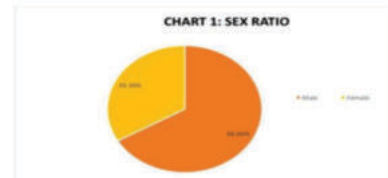
- Small bowel perforation can be either free or contained.
- FREE PERFORATION - Bowel contents spill freely into the abdominal cavity, causing diffuse peritonitis (e.g., duodenal or ileal perforation).
- CONTAINED(CONCEALED) PERFORATION– Prevents the spillage into the peritoneal cavity as adjacent organs and omentum wall off the area of perforation.
- Peptic ulcer perforations are the most common cause of small bowel perforation, presenting as an acute abdomen in adults. However, the rate has fallen in parallel with the general decline in peptic ulcer disease prevalence. Duodenal ulcer perforations are 2-3 times more common than gastric ulcer perforations.
- Approximately 20-30% of patients with acute enteric Fever develop free perforation with peritonitis, and 10-15% of patients with acute diverticulitis develop free perforation. The overall mortality rate is relatively high (20- 40%), mostly because of complications, such as septic shock and multiorgan failure.
- In elderly patients, acute appendicitis has a mortality rate of 35% and a morbidity rate of 50%. A major contributing factor to morbidity and mortality in these patients is coexisting medical conditions in older patients.
- Bowel injuries associated with endoscopy are not a common cause of perforation. As perforations related to endoscopic retrograde cholangiopancreatography (ERCP) occur in only about 1% of patients.

CASE STUDY

- Out of 60 patients diagnosed as small bowel perforation were operated at tertiary care hospital at Vizag from September 2021 to march 2022.
- In the present study ,nearly two-thirds of the patients (68.33%) were males with a male to female ratio of 2:1 , suggesting male preponderance. Most of the patients presented in the 4th decade of life with age 31-40(33.33%).

- In duodenal perforation cases its mostly in the epigastric region. Whereas in the ileal and jejunal perforation cases it is in the RIF .
- In our study.on histopathological examination ,the majority of patients had non specific inflammation(75%) followed by acute inflammation(15%),malignancy 04 cases(6.6%) and tuberculous infection 02 cases(2.3%) as causes of small bowel perforation
- The site of perforation, more than half of the study population had duodenum perforation 36 cases (60%) and in the remaining had ileum 18 cases(30%) and jejunal perforation 6 cases (10%).
- In our study, blunt abdominal trauma following road traffic accidents was one of the most typical jejunal perforation causes, followed by ileal and duodenal perforation.

SEX	CASES	PERCENTAGE (%)
Male	40	66.66%
Female	20	33.33%



SITE OF PERFORATION	CASES	PERCENTAGE (%)
Duodenum	36	60%
Ileum	18	30%
Jejunum	06	10%



HISTOPATHOLOGICAL ANALYSIS

FINDINGS	CASES	PERCENTAGE (%)
Acute inflammation	10	16.66%
Chronic inflammation	34	56.66%
Nonspecific	10	16.66%
Malignancy	04	6.66%
Tuberculosis	02	3.33%



Most of the cases suggested chronic inflammation of the duodenal perforation on histopathological examination. Acute and nonspecific inflammation was found in 10 patients, respectively. 04 cases as malignancy and 02 cases had tuberculosis.

CONCLUSION

- Small bowel Perforation commonly presents in middle-aged male patients working as labourers.
- Commonly presents with abdominal pain and diffuse tenderness.
- Pain abdomen, Vomiting, abdominal distension, Fever, and constipation are chief complaints.
- The presence of Fever indicates septicemia and peritonitis.
- Pallor, dehydration, and features of shock were evident on clinical examination.
- Tenderness, abdominal Guarding, abdominal rigidity, absent/sluggish bowel sounds, and tachycardia were usually Anemia/ raised Haemoglobin levels, and leucocytosis was found in blood investigation.
- Air under the diaphragm on erect X-ray abdomen was diagnostic of perforation in all cases of small bowel perforation.
- The pathological analysis was done by histopathological examination of perforation wall biopsy.
- Chronic inflammation was the most common non-traumatic cause of duodenal perforation (most common small intestine perforation in our study), and nonspecific inflammation in ileal perforation found on histopathological examination.
- Early resuscitation and surgery by exploratory laparotomy is the standard treatment.

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