



A Surgical Audit of Gastro Intestinal Perforations in a Tertiary Care Centre

Authors

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Abstract

Background: *Hollow viscus perforation is common surgical emergencies that possess high morbidity and mortality. Surgery plays a vital role in management of GI perforations*

Objectives: *To study the pattern of gastro-intestinal perforations (1) Most common age and sex involved. (2) The etiological factors and anatomical sites of involvement. (3) Post operative complication in relation to GI perforation management*

Materials: *This study was conducted in the Department of General Surgery, Rajah Muthiah Medical College and Hospital, Chidambaram for a period of 22 months from November 2017 to August 2019. 77 cases of gastro intestinal perforations were studied during this period.*

Results: *The most commonest age group presented with Hollow viscus perforation is 50-60 yrs with male predominance. The most commonest site involved is duodenum. Wound Infection being the commonest complications following appendicular perforation*

Conclusion: *Gastro-Intestinal perforation is the commonest cause of acute abdomen requiring immediate effective surgical infection. Early admission and prompt surgical intervention and good post operative care reduces the morbidity and mortality rates*

Keywords: *Gastrointestinal perforations, Wound infection, Acute abdomen.*

Introduction

Gastro intestinal tract perforations represent one of the most common acute abdominal emergencies in the surgical field and is still a dreaded condition having a high morbidity and mortality rates^[1]. Differences in the clinical presentation of Gastro

Intestinal tract perforations vary from the typical severe acute abdominal pain at one end, to subtle or no symptoms in the hospitalized patients for unrelated illness at the other end. The various atypical presentations that mimic other abdominal conditions throw a real challenge over the

diagnosis to the emergency surgeon. Missed diagnosis and late intervention are frequent cause of increased mortality^[2]. Since it is a rapidly fatal condition death being caused by sepsis, main is to control the sepsis and treat the underlying cause^[3]. Detailed history, good physical examination and good clinical acumen play a major role in diagnosing this acute abdominal emergency.

Aim of the Study

To study the pattern of gastro-intestinal perforations (1) The most common age and sex involved. (2) The etiological factors and anatomical sites of involvement. (3) Post operative complication in relation to GI perforation management

Materials and Methods

This study was conducted in the Department of General Surgery, Rajah Muthiah Medical College and Hospital, Chidambaram for a period of 22 months from November 2017 to August 2019. 77 cases of gastro intestinal perforations were studied during the period.

- Relevant biochemical tests –CBC, RBS, RFT, Sr. Electrolytes, Blood grouping typing
- X-ray chest and erect abdomen, Abdomen - USG (Ultra Sonogram) - E.C.G, CT scan
- Abdominal paracentesis, four quadrant aspiration whenever warranted

In all cases close monitoring of vital signs, pre-operative correction of electrolyte imbalance, antibiotics, and patients was stabilised then taken up

for emergency laparotomy. Perforation size, shape, location noted and appropriate surgical procedure was performed. Peritoneal wash with saline, peritoneal drain was placed. Post operative continuous naso-gastric aspiration, fluids and vitals monitoring was done. Post operative complications occurred during the course of hospitalisation was noted and analysed for this study

Inclusion Criteria

- All cases admitted with signs of perforation peritonitis included irrespective of etiology.
- Patients with abdominal pain, whose investigations revealed hollow viscus perforation.
- Patient with blunt / penetrating injury of abdomen with signs of hollow viscous perforation clinically and radiologically.

Exclusion Criteria

- Cases of Oesophageal rupture
- Cases of perforations of hepatobiliary system
- Cases of iatrogenic perforation during laparotomy
- Cases of delayed presentation with shock and septicaemia whose general condition did not warrant any operative management even after all resuscitative measures.

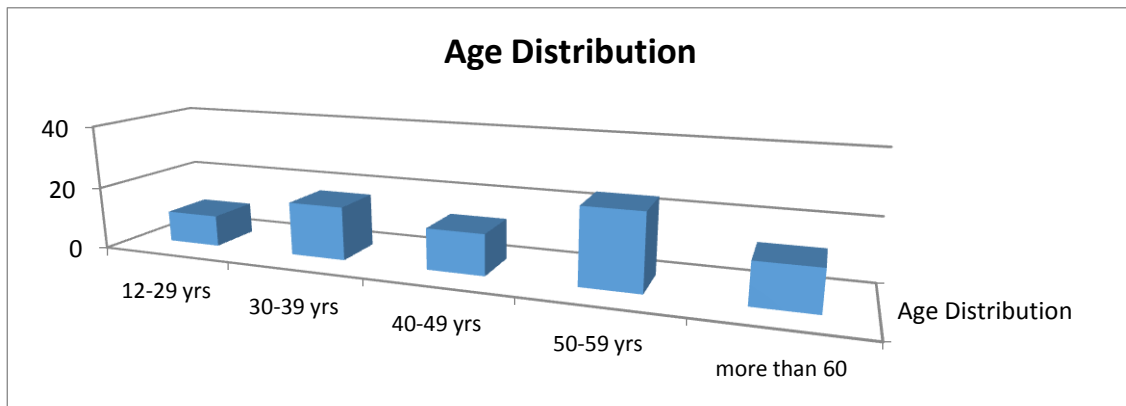
Results

Seventy Seven cases of Gastro Intestinal perforations were studied. Results obtained in the present study were analyzed as follows

Table 1 Age Distribution

Age	Perforation	
	Cases	Percentage
12-29	10	12.9
30-39	17	22.0
40-49	13	16.8
50-59	24	31.1
More than 60	13	16.8
Total	77	100

Figure -1

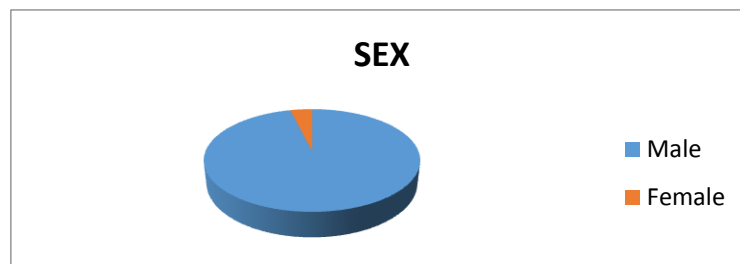


Maximum number of patients belong to 50-60yrs age group

Table 2 Sex Distribution

	Cases	Percentage
Male	74	96.1
Female	3	3.9

Figure - 2

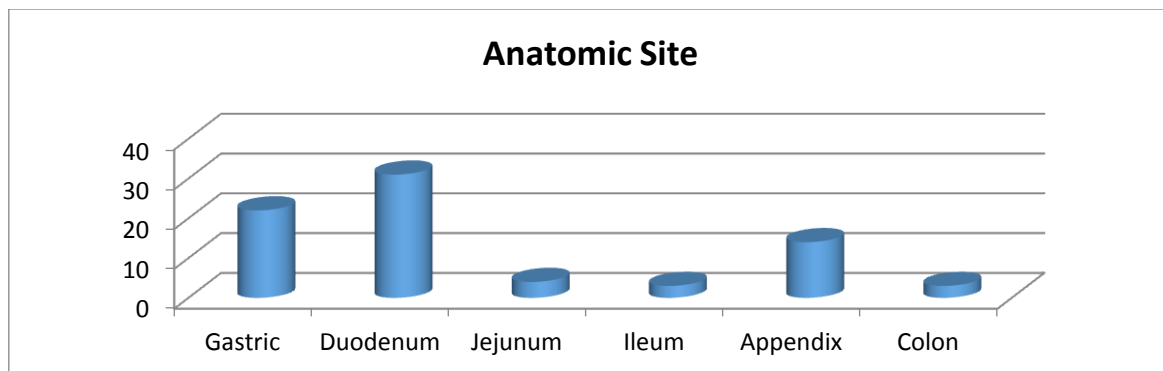


Most commonly affected is Male population

Table 3 Anatomic site of Perforation

Site	No. of Case	Percentage
Gastric	22	28.57
Duodenum	31	40.25
Jejunum	4	5.19
Ileum	3	3.89
Appendix	14	18.18
Colon	3	3.89
Total	77	100

Figure - 3

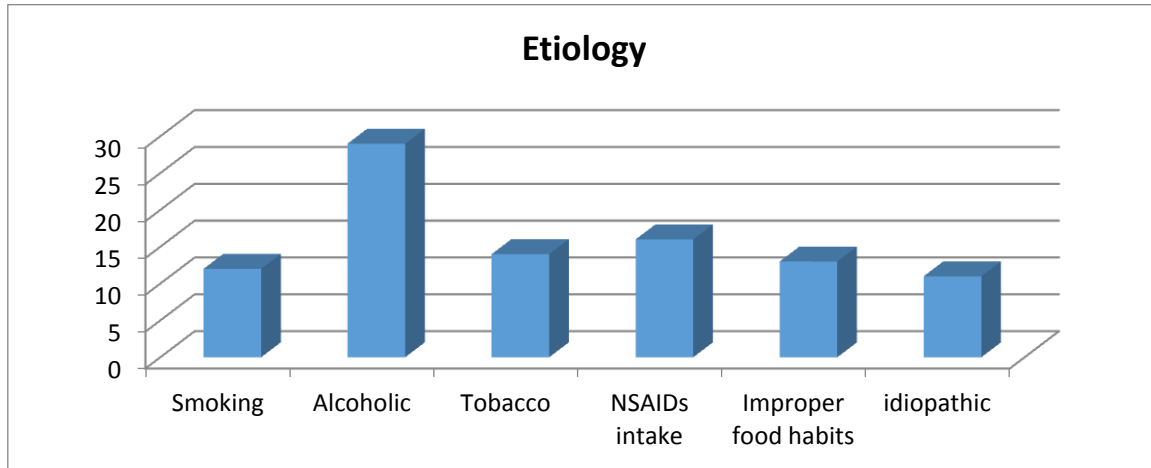


Most commonest site of perforation is Duodenum followed by gastric region

Table 4 Etiological factors

Factors	Cases
Smoking	12
Alcoholic	29
Tobacco Chewing	14
Frequent NSAIDs Intake	16
Improper Food habits	13
Idiopathic	11

Figure 4

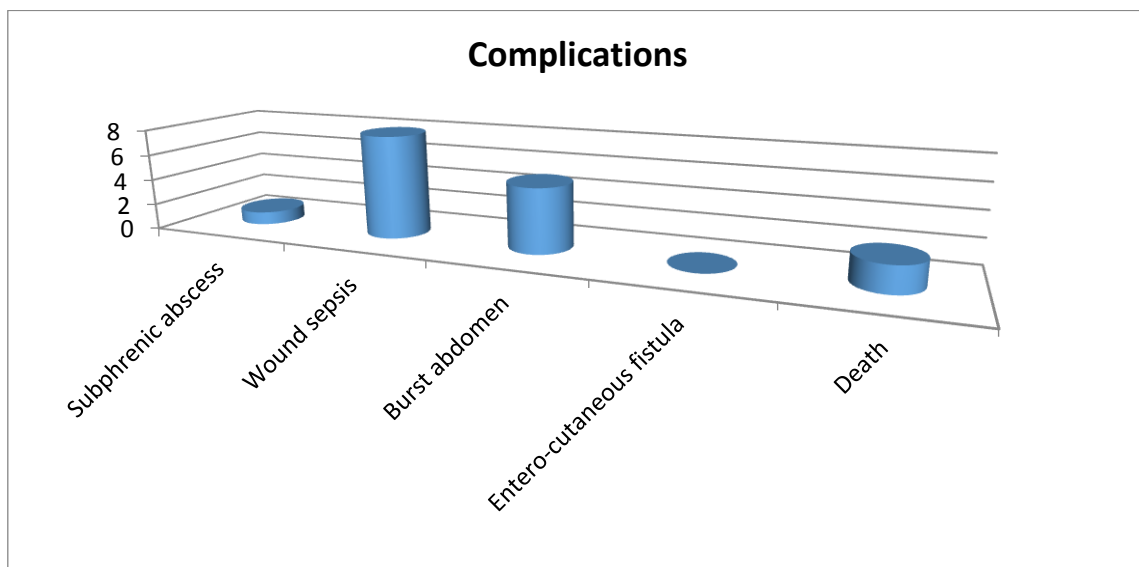


Most commonest cause of perforation is Chronic alcoholism and Smoking

Table 5 - Complications

Complications	Total
Subphrenic Abscess	2
Wound Sepsis	12
Burst abdomen	7
Entero-cutaneous fistula	0
Death	3

Figure 5



Most commonest complication is Wound infection

Discussion

Peptic ulcer disease of the stomach and duodenum has been a leading cause of non traumatic hollow viscus perforation. Overall morbidity, hospitalization and operations for peptic ulcer perforation have decreased, thanks to the widespread use of gastric antisecretory agents and H.pylori eradication. There has been a relative increase in the incidence of peptic ulcer disease and its complication in the elderly, resulting in increased morbidity and hospitalization. The elderly male has been the most profoundly affected largely because of use of Alcohol, NSAIDs^[4] and other etiological factors that include Smoking, improper food habits and trauma. Majority of traumatic perforations were caused by Road traffic accidents^[5]. For appendicular perforation emergency appendectomy with peritoneal lavage is sufficient^[6]. Proximal region perforation is common in india and that of distal perforation is common in western countries^[7].

Conclusion

This is a prospective randomised control study of 77 cases of GI perforation, Admitted in surgical wards of Rajah Muthiah Medical College and Hospital, Annamalai nagar, Chidambaram, Tamil Nadu from November 2017 to August 2019. The results from this present study were analysed. They are

- Among GI perforation, duodenal perforation was common
- 50-60 yrs age group population were commonly affected
- Predominant Males were affected
- Most commonest post operative complication is Wound site infection followed by burst abdomen (9%)
- Mortality rate - 3.6%

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