

# A study on non traumatic abdominal emergencies

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## Abstract

**Background:** Pain in abdomen is one of the most common reasons for visit to the emergency room. An accurate diagnosis is essential for the correct treatment, which in many cases will prevent the mortality. **Aim:** To study the common causes and outcome of non-traumatic abdominal surgeries. **Material and Methods:** A total of 268 cases requiring abdominal emergencies over a study period were studied. Relevant procedures were done in patients. Operative findings and diagnosis were recorded. Final outcome was evaluated. **Results:** Among the total 268 cases studied appendicitis was the commonest accounting for about 66.41% followed by hollow viscus perforation accounting for about 11.94% and obstructed hernias for about 7.46%. **Conclusion:** Our study shows that appendectomy still remains the commonest non traumatic abdominal emergencies. Duodenal perforation was the commonest cause of hollow viscus perforation.

**Key Words:** Non traumatic abdomen, acute abdomen, acute appendicitis, perforation

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## INTRODUCTION

Pain in abdomen is one of the most common reasons for visit to the emergency room. Common causes of acute abdominal pain include acute appendicitis, hollow viscus perforation, obstructed hernia, sigmoid volvulus, twisted ovarian cyst, and nonspecific, nonsurgical abdominal pain.<sup>1,2</sup> Complete history and physical examination are paramount to developing the differential diagnosis for patients presenting with an acute abdomen. The history and physical examination remains the cornerstone of the diagnosis, which is confirmed by laboratory data and when necessary, by radiographic studies.<sup>3</sup> Different surgical procedures have been introduced over the past

two decades to help in the management of acute abdomen. An accurate diagnosis is essential for the correct treatment, which in many cases will prevent the mortality. The objective of this retrospective study was to study the common causes and outcome of non-traumatic abdominal surgeries.

## MATERIAL AND METHODS

All patients admitted in emergency surgical ward as acute abdomen and requiring emergency surgeries in tertiary care hospital were studied for causes and outcome. Patients with history of trauma and those managed conservatively were excluded from the study. A total of 268 cases requiring abdominal emergencies over a study period were studied. The age, sex type of surgery done details were collected from the emergency registers and other records available. The results were tabulated for age and sex incidence according to different surgeries done. Detailed history and clinical examination of all patients were obtained from the case sheets. Routine investigations were also documented. Findings of ultrasonography and CT abdomen pelvis are also noted. Relevant procedures were done in patients. Operative findings and diagnosis were recorded. Final outcome was evaluated.

## RESULTS

A total of 268 cases requiring abdominal emergencies over a study period were studied. Out of 268 cases, 178 cases of acute appendicitis were operated. These included uncomplicated cases of appendix as well as appendicular abscess and mass. Youngest one was 10-year old male child. Oldest one was 76-year old male. The majority of cases were in the age group of 10 - 30 years. 1.12% were below 10 years of age. 3.36% were above 40 years of age. Out of 178 cases, 108 were males and 70 were females. This shows a majority of male patients. Two patients having appendicular mass were operated and 6 appendicular abscess patients were operated and drained. Most of the patients were operated by open procedure. And few Number of patients operated via laparoscopy technique.

**Table 1:** Diagnosis in patients with non- traumatic acute abdominal emergencies

Diagnosis	No. of cases	Percentage
Acute appendicitis	178	66.41%
Hollow viscus perforation	32	11.94%
Obstructed hernia	20	7.46%
Intestinal obstruction	12	4.47%
Others	12	4.47%

A total of 32 cases of intestinal perforation were studied which included 29 cases of duodenal perforation, 2 cases of ileal perforation and one case of gastric perforation. Most of the cases of duodenal perforation were in 4th and 5th decade. The youngest patient was 25 yrs of age and oldest one was around 57 years of age. All the patients were males. A total of 20 cases of obstructed hernia were studied. With inguinal hernia accounting for 18 cases and umbilical hernia 2 cases. Patients with inguinal hernia were usually males and patient with umbilical hernia were females. Most of the patients were in the 5th decade. Right sided inguinal hernia were more commonly obstructed. Most of the cases of intestinal obstruction were in there 4th and 5th decade with 11 males and 1 female. Small bowel obstruction accounting for 10 patients (83.3%) were caused mostly due to postoperative adhesions. 3 cases (16.6%) of large bowel obstruction observed and were due to gangrenous bowel, sigmoid volvulus and rectosigmoid growth. Out of 286 cases, torsion ovarian cyst was most commonly reported to our emergency department. 2 cases of pyogenic liver abscess required laparotomy and 3 cases of emergency cholecystectomy was done for cholecystitis since the conservative line of management failed.

## DISCUSSION

In our study, among the total cases studied appendicitis was the commonest accounting for about 66.41%

followed by hollow viscus perforation accounting for about 11.94% and obstructed hernias for about 7.46%. Malviya *et al*<sup>1</sup> study also found acute appendicitis (61.71%) as the most common cause of acute non-traumatic emergency, followed by acute intestinal obstruction (10.79%), hollow viscus perforation (8.57%). The median age of all the cases of non-traumatic abdominal emergencies was 32.14 years. Malviya *et al*<sup>1</sup> also observed that highest incidence (27.64%) of acute non-traumatic emergencies was seen in 21-30 years age group. In our study, majority of the patients were males. Similar trend of age was noted by Memon *et al*.<sup>2</sup> 56.39% cases of acute non-traumatic emergencies were males and rest (43.61%) were females.

### Acute appendicitis

Out of 268 cases, 178 (66.41%) cases of acute appendicitis were operated. These included uncomplicated cases of appendix as well as appendicular abscess and mass. In a study by Malviya *et al*,<sup>4</sup> acute appendicitis accounted for 61.71% cases of acute non-traumatic emergencies. However, Memon *et al* observed 35%, Chanana *et al* noted 30.60% cases of acute appendicitis in their study.<sup>2,5</sup> The higher incidence in our study could be attributed due to the fact that in our studies other gynaecological, urological cases managed conservatively were excluded.

### Hollow viscus perforation

In our study, duodenal perforation contributed for more than 80% of cases. There was maximum incidence in 31-40 age group accounting for nearly 50% which was in contrast to general studies which showed maximum incidence in 40 plus age group. The younger age group can probably be attributed to the stress and lifestyle with low economic group of our patients. Also males were predominantly more compared to western studies with fewer women working in jobs and exposed to stress. Most of the perforations were in the anterior wall of duodenum (D1). In a study by Malviya *et al*,<sup>4</sup> hollow viscus perforation accounted for 8.57% cases. Duodenal perforation was most common cause accounting for 38.79% of cases while gastric perforation was seen in 19.83%. A Study by Jhobta RS *et al* also found duodenal ulcer (57.34%) as the most common cause of perforation.<sup>6</sup> Out of total 116 cases of hollow viscus perforation 58.62% cases were due to peptic perforations, 23.27% lower G.I.T and 18.11% undiagnosed cases. These results are similar to other studies conducted in India and tropical countries whereas in western literature, lower gastrointestinal tract perforations predominate.

### Obstructed hernia

In present study, 20 cases of obstructed hernia were studied. The right sided inguinal hernias were commonly obstructed contributing to 85% of our cases. One patient

of obstructed umbilical hernia needed resection and anastomosis. No case of incisional hernia which underwent obstruction were reported during the period of our study. Most of the inguinal hernias, anatomical repair, (herniorraphy) was done and for one case of umbilical hernia mesh repair was done.

#### **Intestinal obstruction**

In our study, the commonest cause of small bowel obstruction was postoperative adhesions. Next common was stricture. One case of intussusception required resection and anastomosis of bowel. Two cases of large bowel obstruction requiring emergency surgery were studied. One patient had rectosigmoid growth and sigmoid loop colestomy was done. In Malviya *et al* study,<sup>4</sup> acute intestinal obstruction accounted for 10.79% case and was second leading cause of non-traumatic acute abdominal emergencies. A retrospective study by Memon *et al* also noted that intestinal obstruction was the second leading cause accounting for 28.5% of cases.<sup>2</sup> 87.67% cases of acute intestinal obstruction were due to small bowel as compared to 12.33% due to large bowel with ratio of small bowel to large bowel obstruction is 7.11: 1.3 This is in concordance to study done by Drozd W and Budzyrski P where he observed that small bowel is involved in about 80% of cases.<sup>7</sup>

#### **CONCLUSION**

Our study shows that appendicectomy still remains the commonest non traumatic abdominal emergencies. Duodenal perforation was the commonest cause of hollow viscous perforation.

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