



CAUSES OF NON-TRAUMATIC ACUTE ABDOMEN IN GENERAL SURGERY WARD OF A TERTIARY MEDICAL COLLEGE OF WEST BENGAL : A ONE YEAR RETROSPECTIVE STUDY.

General Surgery

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ABSTRACT

Background- Acute abdomen is one of the commonest surgical emergencies in our hospital. Etiologies vary from country to country and it also changes over decades. Acute abdomen cardinal presents with severe pain abdomen which may last for several hours and may be associated with other symptoms. Underlying cause and presentation may vary according to age, sex and other demographic characters. So it needs to enlist the diseases according to demographic pattern. so that early investigation and management protocol can be formed.

Material and Methods - This is an institutional based retrospective study conducted in Murshidabad Medical College and Hospital among 732 patients admitted under Tuesday unit between January 2019 to December 2019. All patient was studied in terms of patient particulars, clinical presentation, radiological and other investigation performed, modalities of treatment provided, operative findings, post-operative findings and outcomes. Patients bed-head tickets and operation theatre records were information tools.

Results- Male patients and patients aging 21 – 30 years were affected most. Acute appendicitis was the most common diagnosis followed by acute cholecystitis. 38.8% patient underwent emergency surgical interventions, and appendicectomy was most performed surgical procedure. Mortality rate was quite low (2.32%).

Conclusions- In our study young population were most commonly affected. High Prevalence of acute appendicitis, cholecystitis, acute pancreatitis noted, which may be due to low socioeconomic populations, consumption of alcohol and delayed presentation to the health care facility. However, outcome in terms of discharge rate and mortality rate quite good in our study.

KEYWORDS

Acute Abdomen, acute appendicitis, Hollow viscus perforations

1.INTRODUCTION – Acute abdomen refers to sign and symptoms of abdominal pain and tenderness, a clinical presentation that often requires emergency surgical therapy¹. Several surgical, gynaecological and medical diseases may present with acute abdomen which necessitates hospital admission, urgent investigation and prompt treatment according to underlying aetiology.

Acute abdomen is one of the commonest surgical emergencies in our hospital. Etiologies vary from country to country and it also changes over decades.

Acute abdomen cardinal presents with severe pain abdomen which may last for several hours and may be associated with other symptoms like vomiting, jaundice, anorexia, fever. Underlying cause and presentation may vary according to age, sex and other demographic characters.

Acute abdomen varies from dull aching pain to frank guarding and rigidity with associated systemic symptoms; thus, it is important to know spectrum of presentations and which are most frequently occur among them. Surgeons treating a case of acute abdomen should have awareness about diverse aetiology and presentations. So it needs to enlist the diseases according to demographic pattern so that early investigation and management protocol can be formed.

This study was conducted in a tertiary Medical college and hospital of central West Bengal serving mainly rural populations. Our aim was to study epidemiology of non-traumatic acute abdomen.

2.MATERIAL AND METHODS – This is an institutional based retrospective study conducted in Murshidabad Medical College and Hospital among 732 patients admitted under Tuesday unit between January 2019 to December 2019. Patient aged more than 12 years presenting with non-traumatic acute pain abdomen was included in this study. Patient less than 12 years, known patient of gynaecological and medical disease and history of trauma are excluded from this study. All patient was studied in terms of patient particulars, clinical presentation, radiological and other investigation performed, modalities of treatment provided, operative findings, post-operative findings and outcomes. Patients bed-head tickets and operation theatre records were information tools.

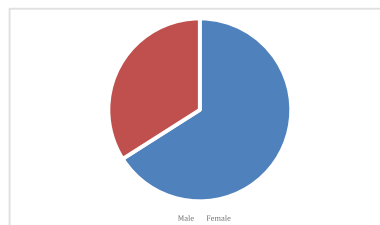
A straight x-ray abdomen was the first investigation, carried out. Subsequent ultrasonography and other imaging and blood investigation were done according to requirement. Decision of operative procedure was taken according to clinical presentation and diagnosis.

All data are incorporated into Microsoft excel sheet and data analysed using standard statistical tools.

3. RESULT AND OBSERVATION

- In this study total 732 patient was included among them 483 patients were male (65.98%). Male and female ratio is 1.94: 1

Figure no 1- sex distribution of patients.



- In this study 28.14 % patients were from 21–30-year age group. Second most group of patients was from 12-20-year age group (21.99%).

Table no 1- Age distribution of Patients

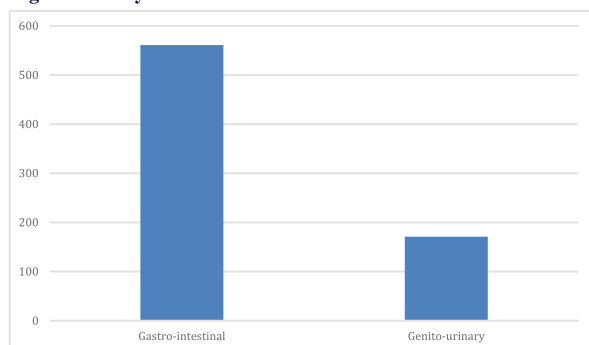
Age Group(years)	Total number of patients	Percentages (%)
12-20	161	21.99
21-30	206	28.14
31-40	147	20.08
41-50	109	14.89
51-60	74	10.10
61-70	22	3.005
>70	13	1.77

- Abdominal pain was main symptom followed by nausea (n=710), vomiting in 620 patients (84.6%), anorexia (n=510), fever (n=230) and abdominal distension (n=140).

Table no 2- Distribution of symptoms among the patients

Symptoms	Number of Patients(n)	Percentages (%)
Pain abdomen	732	100
Nausea	710	96.99
Vomiting	620	84.69
Anorexia	510	69.67
Fever	230	31.42
Abdominal distension	140	19.12
Constipation	67	9.15

- In this study 561 patients (76.33%) admitted due to gastro-intestinal ailment rest 171 patient came to us with acute onset pain abdomen due to Genito urinary cause.

Figure no 2 – system involved in Acute abdomen

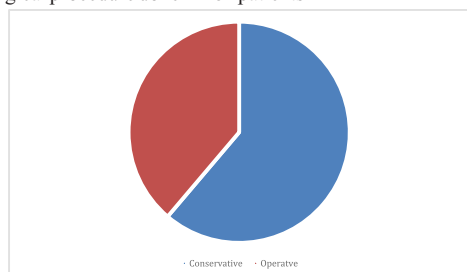
- Among gastro-intestinal disorder acute appendicitis/appendicular lump (31.7%) was most common cause, followed by acute cholecystitis (19.8%), Acute pancreatitis (14.9%), Hollow viscus perforation (11.4%), Acid peptic disorder (10.3%), intestinal obstruction (9.4%), hepatic abscess/hydatid disease (2.31%).

Renal/ureteric calculi (45.02%) was the leading cause of acute abdomen due Genito-urinary disorder, followed by urinary tract infections (25.1%), acute retention of urine (18.12%), pyelonephritis/perirenal abscess (11.69%).

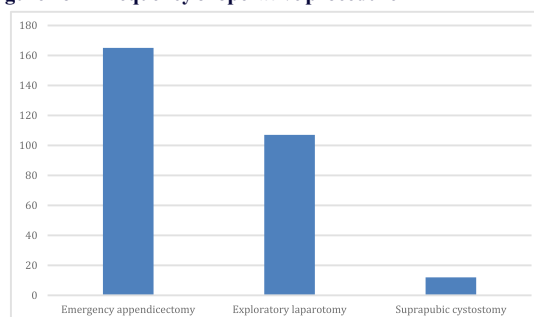
Table no 3-Distribution of diagnosis among acute abdomen patients

Gastro-intestinal disorder (n=561)		
Diagnosis	Frequency	Percentages (%)
Appendicitis/lump	178	31.7
Acute cholecystitis	111	19.8
Acute pancreatitis	84	14.9
Hollow viscus perforation	64	11.4
Acid peptic disorder	58	10.3
Intestinal obstruction	53	9.4
Hepatic abscess/hydatid	13	2.31
Genito-urinary disorder (n=171)		
Renal/ureteric calculi	77	45.02
Urinary tract infection	43	25.10
Acute retention of urine	31	18.12
Pyelonephritis/peri renal abscess	20	11.69

- In this study 448 patients managed conservatively and emergency surgical procedure done in 284 patients

**Figure no 3- Frequency of management given**

- Most common emergency surgical procedure done was emergency open appendicectomy in 165 patients, followed by exploratory laparotomy in 107 patients and suprapubic cystostomy in 12 patients

Figure no 4- Frequency of operative procedure

- Regarding outcome of this patients 681 patients were discharged (93.03%), 18 patients left against medical advice (2.45%), 16 patients referred to higher centre for more sophisticated investigation or management (2.18%) and 17 patients succumbed during management (2.32%).

Table no 4- frequency of outcome

Outcome	Frequency	Percentage (%)
Discharge	681	93.03
Left against medical advice	18	2.45
Referral to higher centre	16	2.18
Death	17	2.32

4.DISCUSSION –

Acute abdominal pain is the most common cause of hospital admission specially in general surgery ward. In our one year study period total 732 patients were included.

In this study male patients were more in number. Male: Female ratio was 1.94:1. Most of previous study also found male predominance, one of this study conducted by Chanana L et al² found 56.8% were male patients in their study.

In our study 28.14% patients were in 3rd decade. Second most patients were from 12-20-year age group (21.99%). In a study conducted by Barai B et al found most patient belonging in 25–50-year age group³.

Abdominal pain was main symptom among all 732 patients, followed by nausea (96.99%), vomiting (84.69%), Anorexia (69.67%), fever (31.42%), abdominal distension (19.12%) and constipation (9.15%). In a study done in 100 patients by Abhinav et al, pain abdomen was the main complaint in all the 100 patients (100%), followed by vomiting in 78%, constipation in 29%, abdominal distension in 26% and fever in 17% of the patients⁴.

In this study 76.33% cases were admitted due to acute abdomen related to gastro-intestinal disorder. Acute appendicitis/lump (31.7%) was most common cause, followed by acute cholecystitis (19.8%), Acute pancreatitis (14.9%), hollow viscus perforation (11.4%), Acid peptic disorder (10.3%), intestinal obstruction (9.4%) and hepatic abscess/hydatid disease (2.31%). In a study done by Jain et al in India, the most common cause was perforative peritonitis (39.7%), followed by acute appendicitis (37.7%), and followed by intestinal obstruction (14.2%)⁵. An African study shows that most common causes of the admissions were acute appendicitis 698 (22.4%), typhoid ileal perforation 506 (16.2%), acute intestinal obstruction 391 (12.6%), gastroduodenal perforations 342 (11.0%)^{6, 8}.

In our study 61.20% patients were managed conservatively and 38.80% patients underwent emergency surgical procedure. A study conducted by Kumar N R et al shows that among the patients presenting with acute abdomen to the emergency room, patients who were managed medically/conservatively constituted 62%, and those who are managed surgically constituted 38%. About 2% of patients of the medically/conservatively managed patients got retreated surgically⁹. So our study corroborated to the said study.

Regarding outcome of this patients 93.03% patients were discharged and 2.32% patients succumbed during management. A study conducted by Zahid M et al¹⁰ documented mortality rate 7.14 %, another study conducted in Ethiopia shows that overall mortality rate of (6.4%)¹¹. so in our study mortality rate was quite low. Similar mortality rate found in another study conducted bi Barai B et al³.

6. CONCLUSION-

With advancement of medical sciences outcome of acute abdomen improves but diagnosis and management of acute abdomen is still challenging to general surgeons. Presentation and outcome differ according to demographic characters. In our study young population were most commonly affected. High Prevalence of acute appendicitis, cholecystitis, acute pancreatitis noted, which may be due to low socioeconomic status, consumption of alcohol and delayed presentation to the health care facility. However, outcome in terms of discharge rate and mortality rate were quite good in our study. Still there is scope of improvement by proper knowledge of spectrum of diseases, presentation and management protocol formulation.

6. REFERENCES-

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