



To Study the Clinical Features of Various Causes of Acute Abdomen Patients at Medical college Hospital Bikaner

Authors

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Abstract

Background: *The acute abdominal pain is defined as a pain that arises suddenly and is of less than a week's and in most cases less than 48 hours' duration.*

Methods: *Hospital prospective based study conducted in Department of General Surgery, S.P. Medical College And Associated Group of Hospitals, Bikaner. 100 patients reporting to the Surgery department within study duration and eligible as per inclusion criteria were included in the study.*

Results: *In our study acute appendicitis is the most common cause of acute abdomen comprising of 48% of cases followed by perforation peritonitis comprising of 22% cases. Among perforation peritonitis Peptic Perforations were the most common type (17%). Biliary diseases comprised of 11% of cases.*

Conclusion: *Acute abdomen is one of the most common presentations in emergency department. The common causes are acute appendicitis, perforation peritonitis, biliary diseases and intestinal obstructions followed by traumatic causes in decreasing order.*

Keywords: *appendicitis, perforation peritonitis, biliary diseases.*

Introduction

The acute abdominal pain is defined as a pain that arises suddenly and is of less than a week's and in most cases less than 48 hours' duration^{1,2}. The term acute abdomen defines a graver presentation of abdominal pain, accompanied by guarding and muscular rigidity, which essentially describes the clinical picture of peritonitis and usually calls for an emergency operation³. This led to the common misconception that the acute abdomen is synonymous with the surgical abdomen. However, not all cases of acute abdomen are best treated with surgery. In literature as well as in clinical

practice the borders between the acute abdominal pain and acute abdomen overlap and are used interchangeably.

The term "acute abdomen" denotes an episode of severe abdominal disorder, which may require urgent surgical intervention. Many medical and gynaecological diseases also manifest as acute abdomen and to differentiate them at times is quite difficult⁴.

Material and Methods

Study Design: Cross sectional Hospital based study.

Study Duration: 12 months (August 2016 to July 2017).

Study Place: Department of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

Study Population: All patients who present with acute abdomen

Sample Size: All patients reporting to the Surgery dept. within study duration and eligible as per inclusion criteria will be included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria

All patients who present with acute abdomen including blunt trauma to abdomen and those who give consent are included for study.

Exclusion Criteria

1. All pregnant and gynaecological cases
2. Patients with post operative abdominal scar and postoperative peritonitis
3. All patients with renal or ureteric calculi.
4. All patients with diagnosed coagulation disorders.
5. Pediatric age group (<15 years)

Data Collection

Data were collected from the patients by their clinical history, clinical examination with

appropriate investigations on those patients who were admitted. Accurate history was taken with respect to the Pain - Onset, type, site, progress, aggravating and relieving factors.

- Nausea and Vomiting.
- Distention of abdomen.
- Bowel and bladder disturbance.
- Menstrual disturbance.

Vital signs of the patient were recorded and thorough clinical examination was done for the evidence of abdominal tenderness, guarding, rigidity, obliteration of liver dullness and peristaltic sounds. Based on the history and clinical examination, provisional clinical diagnosis was made and appropriate investigations according to clinical diagnosis was done in all patients.

Data Analysis

To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Statistical software SPSS was used and data were analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test.

Observations

Table 1 Distribution of Cases According to Final Diagnosis

Causes	No. of Cases	Percentage
Acute Appendicitis	48	48.0
Acute Cholecystitis	6	6.0
Acute pancreatitis	5	5.0
Appendicular Lump	6	6.0
Appendicular Perforation	1	1.0
BTA	4	4.0
Diverticulitis	1	1.0
Intestinal Obstruction	7	7.0
Perforation Peritonitis	22	22.0
• Peptic	17	17.0
• Intestinal	2	2.0
• Colonic	1	1.0
• Rectal	1	1.0
• BTA with perforation	1	1.0

In our study acute appendicitis is the most common cause of acute abdomen comprising of 48% of cases followed by perforation peritonitis comprising of 22% cases. Among perforation peritonitis Peptic Perforations were the most

common type (17%). Biliary diseases comprised of 11% of cases.

The traumatic cases comprised of 5% of the cases of patients presenting with acute abdomen.

Table 2 Distribution of Cases of Acute Abdomen According to Age

Cause	No. of Cases	Age Group (years)					
		15-30		31-50		>50	
		No.	%	No.	%	No.	%
Acute Appendicitis	48	31	64.58	17	35.41	0	-
Acute Cholecystitis	6	0	-	1	16.66	5	83.33
Acute pancreatitis	5	0	-	1	20.0	4	80.0
Appendicular Lump	6	5	83.33	1	16.67	0	-
Appendicular Perforation	1	0	-	1	100.0	0	-
BTA	4	3	75.0	1	25.0	0	-
Diverticulitis	1	0	-	0	-	1	100.0
Intestinal Obstruction	7	3	42.86	1	14.28	3	42.85
Perforation Peritonitis	22	4	18.18	12	54.54	6	27.27
• Peptic	17	3	17.65	8	47.06	6	35.29
• Intestinal	2	1	50.0	1	50.0	0	-
• Colonic	1	0	-	1	100.0	0	-
• Rectal	1	0	-	1	100.0	0	-
• BTA with perforation	1	0	-	1	100.0	0	-
Total	100	46	46.0	35	35.0	19	19.0

In our study majority of patients presenting to surgical department comprised of the younger age group of 15-30 years (46%) followed by 31-50 year age group (35%). The older age group represented a lesser fraction of around 19%.

Pathologies related to Appendix were majorly present in the younger age group of 15-30 years with acute appendicitis making the most common cause comprising 67.4% of patients followed by appendicular lump of 10.9%.

BTA was another subgroup which was more common in the young population.

In the middle age group of 31-50 again appendicitis had the majority comprising 48.6% of

cases followed by perforation peritonitis with an incidence of 34.2%. Among the perforation peritonitis Peptic perforations were the most common cause (22.9%)

Biliary diseases (Acute cholecystitis and Acute Pancreatitis) were more common in the older age group comprising around 47% of causes of acute abdomen in the subgroup >50 years followed by peptic perforations(31.6%) and intestinal obstruction(15.8%). Diverticulitis was another cause of acute abdomen seen only in this age group.

Table 3 Distribution of Cases of Acute Abdomen According to Sex

Cause	No. of Cases	Gender			
		Female		Male	
		No.	%	No.	%
Acute Appendicitis	48	13	27.08	35	72.92
Acute Cholecystitis	6	5	83.33	1	16.67
Acute pancreatitis	5	3	60.0	2	40.0
Appendicular Lump	6	3	50.0	3	50.0
Appendicular Perforation	1	0	-	1	100.0
BTA	4	0	-	4	100.0
Diverticulitis	1	0	-	1	100.0
Intestinal Obstruction	7	2	28.57	5	71.42
Perforation Peritonitis	22	4	18.18	18	81.81
• Peptic	17	4	23.52	13	76.47
• Intestinal	2	0	-	2	100.0
• Colonic	1	0	-	1	100.0
• Rectal	1	0	-	1	100.0
• BTA with perforation	1	0	-	1	100.0
Total	100	30	30.0	70	70.0

In our study, males had preponderance over females comprising 70% of all the causes of acute abdomen.

In females as well as males acute appendicitis was the most common cause with incidences of 43.3% and 50% respectively.

Biliary causes were more common in females making 26.7% of the group.

Perforation peritonitis as well as BTA was more common in the male population (25.71% and 5.7%).

Intestinal obstruction was also greater in frequency in males with them comprising 71.4% of all cases of intestinal obstruction.

Table 4 : Distribution of Cases of Acute Abdomen According to Onset of Pain

Cause	No. of Cases	Onset of Pain (days)					
		<1		1-3		>3	
		No.	%	No.	%	No.	%
Acute Appendicitis	48	14	29.16	20	41.67	14	29.16
Acute Cholecystitis	6	1	16.67	3	50.0	2	33.33
Acute pancreatitis	5	2	40.0	2	40.0	1	20.0
Appendicular Lump	6	0	-	3	50.0	3	50.0
Appendicular Perforation	1	0	-	0	-	1	100.0
BTA	4	2	50.0	2	50.0	0	-
Diverticulitis	1	0	-	1	100.0	0	-
Intestinal Obstruction	7	0	-	4	57.14	3	42.86
Perforation Peritonitis	22	6	27.27	7	31.82	9	40.91
• Peptic	17	5	29.41	6	35.29	6	35.29
• Intestinal	2	0	-	1	50.0	1	50.0
• Colonic	1	0	-	0	-	1	100.0
• Rectal	1	1	100.0	0	-	0	-
• BTA with perforation	1	0	-	0	-	1	100.0
Total	100	25	25.0	42	42.0	33	33.0

Most of the patients of acute abdomen presented within 24 to 72 hours (42%) followed by >72 hours involving 33% of the cases.

41.7 % of the acute appendicitis patients presented between 24 to 72 hours followed by 29.16 %

cases of acute appendicitis which presented within 24 hours. Majority of perforation peritonitis cases (40.91%) presented with duration of more than 72 hours in our study.

Table 5. Distribution of Cases of Acute Abdomen According to Type of Pain

Cause	No. of Cases	Type of Pain					
		Mild		Moderate		Severe	
		No.	%	No.	%	No.	%
Acute Appendicitis	48	25	52.08	11	22.91	12	25.0
Acute Cholecystitis	6	0	-	1	16.67	5	83.33
Acute pancreatitis	5	0	-	0	-	5	100.0
Appendicular Lump	6	4	66.67	2	33.33	0	-
Appendicular Perforation	1	0	-	0	-	1	100.0
BTA	4	0	-	0	-	4	100.0
Diverticulitis	1	0	-	0	-	1	100.0
Intestinal Obstruction	7	0	-	3	42.86	4	57.14
Perforation Peritonitis	22	2	9.09	2	9.09	18	81.81
• Peptic	17	1	5.88	1	5.88	15	88.24
• Intestinal	2	0	-	0	-	2	100.0
• Colonic	1	0	-	1	100.0	0	-
• Rectal	1	0	-	0	-	1	100.0
• BTA with perforation	1	1	100.0	0	-	0	-
Total	100	31	31.0	19	19.0	50	50.0

50 % of all the cases presented with severe pain followed by 31 % of cases with mild pain. Most number of the cases of acute appendicitis (52.08%) presented with mild pain. Pain was severe in intensity in 81.81% of the perforation peritonitis patients. Whereas 90.9 % of all the biliary causes presented with severe pain abdomen.

Discussion

The present study was conducted in the Department of Surgery, S.P. Medical College and A.G of hospitals, Bikaner during the period of 1st august 2016 to 31st July 2017 on cases presenting with acute abdomen to the surgical department from whole area of north western Rajasthan. Total 100 cases were studied in duration of 1 year.

In the present study the most common cause of acute abdomen was acute appendicitis accounting for 48% of the overall cases followed by cases of perforation peritonitis which had an incidence of 22%. Diverticulitis (1%) was the least common cause seen in this study.

The overall pathologies involving the appendix were 55% which also included cases of appendicular lump and appendicular perforation.

Among perforations peptic perforation was most common (17%) followed by intestinal perforations (5%). Biliary diseases including both acute cholecystitis and acute pancreatitis accounted for 11% cases of acute abdomen. Another common cause of acute abdomen was intestinal obstruction observed in 7% of the cases. Incidence of Blunt trauma abdomen in this study was 5%.

The observations recorded in this study were found to be similar to those conducted by Al Mulhim et al⁵ in which acute appendicitis was the most common cause of acute abdomen accounting for 47% of the cases. The incidence of gall stone disease in this study was found to be 11% whereas intestinal obstruction was observed in 8% of the cases which is at par with our study.

In study conducted by Matin et al⁶ the incidence of acute appendicitis was found to be 32% and those of biliary diseases was 7.33%.

Conclusions

Acute abdomen is one of the most common presentations in emergency department. The common causes are acute appendicitis, perforation peritonitis, biliary diseases and intestinal obstructions followed by traumatic causes in decreasing order.

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