

## A Clinical study on Pattern and Presentation of Acute Abdomen in a tertiary care Hospital of North India



### Medical Science

**KEYWORDS :** Abdominal pain, Acute Abdomen, Acute Appendicitis, Perforation Peritonitis, Acute Cholecystitis.

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### ABSTRACT

*Background: Abdominal pain of sudden onset is the hallmark of most non-traumatic emergency surgical presentations. Most of the patients complain of pain abdomen of severe onset. In surgical emergency, perforation of hollow viscous is the main cause followed by acute appendicitis, acute cholecystitis and other causes. Every patient should be thoroughly investigated and managed on priority basis and immediate surgical intervention be done should to decrease the morbidity and mortality. Objectives: The study was done to know the differential diagnosis of the acute abdomen and to study the pattern of presentation of the disease. Material and Methods: It was a prospective cross sectional study done on 200 cases admitted in Department of Surgery, Career Institute of Medical Sciences, Lucknow with the diagnosis of Acute abdomen. Two hundred patients presenting at the Career Institute of Medical Sciences surgery/emergency unit and managed by the general surgeons between 1st of January 2015 and 31st of December 2015 were recruited and followed-up throughout the period of admission. The biodata and clinical information inclusive of diagnosis, investigations, treatment modality and outcome were entered in a structured questioner. Standardized treatment was given to all patients and difficulties encountered in their management were also noted. The data collected was evaluated using SPSS17. Results: Two hundred patients who met the inclusion criteria were recruited during the study period. The patients' age ranged from 10 to >60 years, 52.5% of the patients were aged 21- 40 years while those aged 41-60 yrs constituted 37.5% of all cases. One thirty six (68%) patients were male while 64 patients (32%) were female. The commonest cause of acute abdomen was appendicitis (35%) followed by intestinal obstruction (23.5%), perforated typhoid ileitis 16.5 % and peptic ulcer disease (10.5%), respectively. Conclusion: The presentation of acute abdomen in our emergency is mostly of the cases of appendicitis, intestinal obstruction, perforated typhoid followed by peptic ulcer disease. Every case of acute abdomen should be thoroughly investigated and managed accordingly.*

#### Introduction:

Acute abdomen is a common condition encountered in emergency surgical practice.<sup>1,2</sup> A careful and methodical approach is needed in order to reach a correct diagnosis. The causes of acute abdominal pain have a wide spectrum and a detailed history, thorough clinical examination and organized investigations will lead to correct management. The clinical course that may develop over a variable time period is a result of a wide range of intra and extra abdominal pathologies.<sup>3</sup> Pain is the predominant symptom of the acute abdomen and the knowledge of anatomy and pathophysiology is important in assessment.

The common causes of acute abdominal pain necessitating admission to a surgical ward include acute appendicitis<sup>4</sup> and nonspecific abdominal pain,<sup>5</sup> while other serious pathologies may be a reflection of infection, mechanical obstruction, biliary disease, malignancy, cardiac problems, and GI ischemia.<sup>1,6</sup> The symptom complex of acute abdomen commonly results from luminal obstruction, inflammation and peritonitis. Recently, abdominal tuberculosis is becoming a major surgical emergency in our part of world.<sup>7</sup>

Assessment of such patients and decision making for their management is crucial, since some of them will have life threatening conditions that require immediate surgery which improves outcome; others may need a trial of conservative management that may require intervention if the condition fails to settle. A detailed history, full clinical examination and carefully selected investigations will lead to correct diagnosis and management.<sup>1</sup>

We noted that no similar study had been done in this hospital to document the aetiological spectrum of diseases presenting as acute abdomen in the adult patient at the surgical emergency prior to the time of this study. It therefore became imperative to conduct a similar study in the adult population.

#### Aims and objectives:

To find out the cause of acute abdomen and to study the pattern and presentation of the disease, which can be in turn useful for planning management of such cases.

#### Material and methods:

It was a prospective cross sectional study done on 200 cases admitted in Department of Surgery, Career Institute of Medical Sciences, Lucknow with the diagnosis of Acute abdomen. Two hundred patients presenting at the Career Institute of Medical Sciences surgery/emergency unit and managed by the general surgeons between 1st of January 2015 and 31st of December 2015 were recruited and followed-up throughout the period of admission.

There was no exclusion criteria regarding the age and sex. Only cases presenting within 24 hours of initiation of pain were considered and evaluated for the study. The biodata and clinical information inclusive of diagnosis, investigations, treatment modality and outcome were entered in a structured questioner. Standardized treatment was given to all patients and difficulties encountered in their management were also noted. The data collected was evaluated using SPSS17.

#### Results:

Two hundred patients who met the inclusion criteria were recruited during the study period. The patients' age ranged from 10 to >60 years, 52.5% of the patients were aged 21- 40 years while those aged 41-60 yrs constituted 37.5% of all cases. One thirty six (68%) patients were male while 64 patients (32%) were female (Table no.1).

Abdominal pain was the commonest presenting symptom (97.2%). This was followed by vomiting (70.5%), anorexia (56.9%) and fever (47.8%). One hundred and two patients (51%) were found to be dehydrated on admission while 10 patients (5%)

were admitted in shock and needed to be resuscitated.

A summary of the causes of surgical acute abdomen as seen within the study period at the surgical emergency unit of Career Institute of Medical Sciences, Lucknow is shown on Table no.2

Age group (in years)	No of cases of Acute Abdomen
10-20	12 (6%)
21-40	105 (52.5%)
41-60	75 (37.5%)
>60	08 (4%)
Sex of study subjects	No of cases of Acute Abdomen
Male	136 (68%)
Female	64 (32%)

**Table 1: Age and sex distribution of patients with acute abdomen**

Causes of Acute Abdomen	No. of Patients	Percentage (%)
Appendicitis	70	35
Intestinal Obstruction	47	23.5
Perforated Typhoid	33	16.5
Peptic Ulcer Disease	21	10.5
Trauma	10	05
Non Specific Abdominal Pain	05	2.5
Cholecystitis	05	2.5
Primary Peritonitis	02	01
Pancreatitis	01	0.5
Enteric Fever	01	0.5
Gangrenous Bowel	01	0.5
Intra abdominal abscess	01	0.5
Gas gangrene	01	0.5
Bowel Injury	01	0.5
Unable to make diagnosis	01	0.5

**Table 2: Summary of different causes of acute abdomen**

**Discussion:**

Acute abdomen is a common presentation in emergency department, because serious and benign intra-abdominal conditions share many relatively nonspecific symptoms, it is often difficult to identify patients who have life-threatening problems early in the course of their disease. Apart from relieving the patient's symptoms, the emergency surgeon's primary role is to detect and stabilize life-threatening conditions in a rapid and cost-effective manner. The most common condition encountered by emergency surgeon is acute appendicitis.<sup>5,9</sup> The only way to reduce morbidity and prevent serious complications is to perform appendectomy before perforation or gangrene occurs.<sup>8,10</sup> In the present study, half of all the patients with acute abdomen had appendicitis. Acute intestinal obstruction was next common diagnosis that was seen in 47 patients. These were caused by intestinal tuberculosis, obstructed / strangulated hernia, and with Meckel's diverticulum & obstructed carcinoma colon. In contrast much lesser figures were reported by Chaudhry et al.<sup>11</sup> Perforated typhoid ulcer was seen in 33 cases. Typhoid fever is a public health problem in the developing areas of the world with poor hygienic conditions.<sup>12</sup> Poorly treated patients may develop enteric perforation, usually during 2nd or 3rd week that is associated with high morbidity and mortality.<sup>13</sup> Duodenal ulcer perforation was seen in 10.5% cases, comparable to Espinoza that has reported an incidence around 9%.<sup>14</sup> All these cases had free gas under the diaphragm, a finding that was diagnostic. These patients were followed on conventional anti-ulcer treatment after surgery.

**Limitations of study:**

As it is a single centre study with a relatively small study population, results cannot be generalized to the entire population.

**Conclusion:**

Acute appendicitis is the most common condition encountered in patients presenting with acute abdomen. Most patients having acute abdomen are relatively young in the 3rd and 4th decades of life. Lack of health education, improper health care fa-

cilities and late presentations are common factors for increased morbidity. Sepsis is the major cause of morbidity and mortality in acute abdomen.

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