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Observation and Management of Cases of Acute Abdomen Admitted In Dmch Emergency

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Abstract
Introduction: *Acute abdomen is all time enigma, rightly described as Pandora's box by Desai and Irani[1]. It is an Intra-abdominal condition of abrupt onset usually associated with pain due to Inflammation, perforation, obstruction, infarction or rupture of abdominal organs requiring emergency surgical or medical intervention.*
Aim: *To study the clinical observation and management of cases of acute abdomen patients admitted in the surgical emergency department DMCH Darbhanga.*
Material & Methods: *This prospective study was conducted in the, Darbhanga Medical College & Hospital, Laheriasarai,(2011–2013). A total number of hundred cases(new born to 70 years of age,58 males,42 females) of acute abdomen were included in this study. Proper work up of the admitted patients were done and diagnosis was made on basis of clinical examination ,,routine investigations, and radiological investigations.Patients were then managed either surgically or conservatively according to need.*
Results: *Intestinal obstruction due to various pathologiesis the leading cause of acuteabdomen followed by perforations, followed by inflammation of viscus. Most common manifestation of acute abdomen is pain. majority of patients belong to low socio economic status. Males dominates over females . Age wise incidence is highest in 3rd and 5th decade of life .77% of 100 cases were treated with open surgery and 9% with laparoscopic surgery and 16% treated conservatively.*
Key Words: *acute abdomen,perforation,obstructionlaparoscopy,laparotomy*

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I. Introduction

The acute abdomen is all time enigma. It is rightly described as Pandora's box by Desai and Irani,1962. The earliest mention of acute abdomen dates back to 1560 BC, An Egyptian suffered from intestinal obstruction, has been described by Papyrus.

The acute abdomen refers to sudden, severe abdominal pain that is less than 48 hours in durations. In many cases it is a surgical emergency, and requires urgent and specific diagnosis and management.Acute abdomen generally refer to previously undiagnosed pain that arises suddenly and is of less than 7 days (usually 48 hours) duration. It can be caused by variety of intra-peritoneal and extra-peritoneal disorders which typically calls for surgical or medical treatment.Abdominal pain that persists for 6 hours or longer are usually caused by disorders of surgical significance

Acute abdomen presents challenge to surgeon's clinical experiences and often presents as diagnosis and treatment challenge as well, particularly in poorly resourced environments with a lack of modern medical facilities.

II. Material And Methods

A total of 100 consecutive cases of acute abdomen wereenrolled in this study. All these cases were taken from the surgery emergency department Darbhanga Medical College Hospital from Aug. 2011 to July 2013(age group new born to 70 years)

INCLUSION CRITERIA

All acute abdominal cases presenting in surgery department

Patients and/or his/her legally acceptable representative willing to provide voluntary writteninformed consent for participation in the study.

EXCLUSION CRITERIA :

- Without any medical comorbid conditions.
- All acute abdominal cases presenting with pregnancy
- All the Patients presenting with traumatic acute abdomen case
- Age above 70 years.

Written informed consent was obtained from all the studysubjects and approval for the study was obtained from the Hospital Ethical and Research Committee of the DMCH Darbhanga.

General information of patient presenting with complaints of pain abdomen, vomiting, distension, constipation obstipation, their history of present illness,past history,family history,personal history along with general physical examination followed by local examination with emphasis on shock, jaundice, pallor, dehydration, lymph node, edema and other alarming factors.

This includes –inspection,palpation,percussion and auscultation, examination of other systems like respiratory system,cardiovascular system, nervous system, scrotum spine

Laboratory investigation and skiagrams –which includes routine blood investigations like : CBC, Serum creatinine, blood sugar, blood urea, serum electrolyte, LFT, Amylase, coagulation profile

Radiological examinations like: Plain X-ray abdomen,ultrasonography, CT scan and also in some cases laparoscopy and abdominal paracentesis

Diagnosis – Pre operative diagnosis is decided on the basis of history, clinical findings and investigations.

Management of patient done either operatively or conservatively. Operative methods may be open surgical method, laparoscopic or robotic here mostly open surgical methods are practiced

Follow up –

All patients were watched carefully while in hospital and in cases of complications they were managed accordingly.However, majority of cases did not come for Follow up after being discharged from the hospital. Hence follow up after discharge from hospital was not carried out.

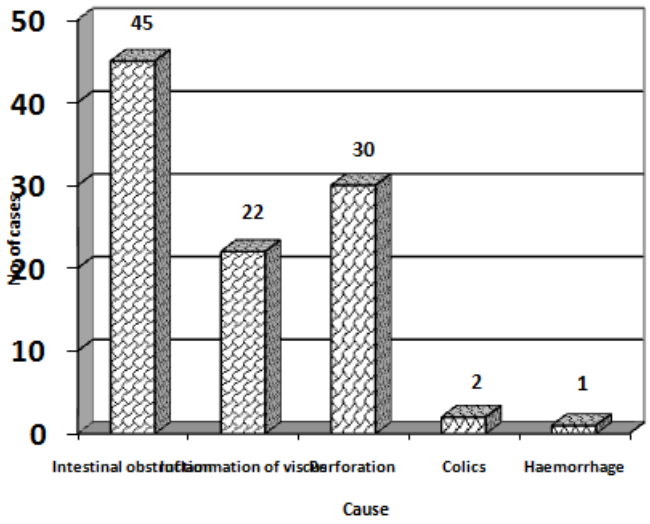
III. Results

Classification of the acute abdomen with incidence

	No. of Cases	Percentage
1. Intestinal Obstruction	45	45%
2. Inflammation of Viscus	22	22%
3. Perforation	30	30%
4. Colic	2	2%
5. Haemorrhage	1	1%

From above table it is clear that intestinal obstruction due to various causes, is commonest cause of acute abdomen

Fig.: Classification of the acute abdomen with Incidence



Sub Classification of etiology of the acute abdomen with incidence

	Intraoperative (Except for cases treated conservatively)			
Etiology (Based on Clinical Features and Radiological Findings)	**Presumptive Diagnosis**	No. of Cases	Open Surgery	Laparoscopic Surgery
1. Intestinal Obstruction	Strangulated hernia	5	5	0
	Band and adhesions	27	22	0
	Volvulus	2	2	0
	Roundworm Obstruction	2	0	0
	Tuberculous stricture	5	5	0
	Intussusception	3	3	0
	Imperforate anus	1	1	0
2. Inflammation of viscus	Acute appendicitis	8	5	3
	Acute cholecystitis	9	5	4
	Colitis	1	0	0
	Acute gastritis	1	0	0
	Acute pancreatitis Empyema G.B Appendicular Lump	1 1 1	0 1 0	 0 0 0
3. Perforation	D.U. Perforation	11	10	0
	Appendicular perforation	2	2	0
	Typhoid perforation	7	7	0
	Gastric perforation	7	6	0
	G.B. perforation	1	1	0
	Tuberculous perforation	2	2	0
4. Colic	Ureteric colic	2	0	0
5. Haemorrhage	G.I. haemorrhage	1	0	0

incidence of acute abdomen was highest in 3rd and 5th decades (19% and 23% respectively). Number of cases above 70 years were nil, (as excluded)

In this series of 100 cases male constituted 58% and female 42%. The ratio between male and female is 1.38:1 cases of acute abdomen is commoner among vegetarian (58%) than non-vegetarian (42%).

Clinical features in different types of acute abdomen

Table III

Clinical features	**Intestinal obstruction**	**Inflammation of viscus**	**Perforations**	**Colic**	**G.I. Haemorrage**	**Total**
Total No. of cases	45	22	30	2	1	100
Pain	45	22	30	2	1	100
Vomiting	44	17	15	2	1	79
Absolute constipation	40	12	27	0	0	79
Distension abdomen	39	3	18	0	0	60
Rigidity	14	18	24	0	0	56
Absent bowel sound	5	1	27	0	0	33
Liver dullness obliteration	0	0	26	0	0	26

From above table it is clear that pain was predominant feature in all cases of acute abdomen. Vomiting was present in 79% of cases, bowel sound was absent in 33% of cases. Distension of abdomen was found in 60% of cases.

77% of cases treated by open surgery and 7% of cases treated by laparoscopic surgery and remaining 16% treated by conservative method.

77% of cases treated open surgery with mortality (15.58%), where 7% of cases treated by laparoscopic surgery with mortality (0%), 16% of cases treated conservatively with mortality of (18.75%).

Death rate was maximum in 51-60 years age group (38.46%). In 21-30 years age group death rate was 10.52%%. In 41-50 years age group death rate was 13.04%.

IV. Discussion

Acute abdomen is one of the commonest emergency encountered in surgical ward. In my study 100 consecutive cases were included for study of clinical observation and management of acute abdomen.

General Incidence : In the present series of acute abdominal emergencies, acute intestinal obstruction constitute 45 cases i.e. 45% of total cases (Vide Table-Ia).Bhosla (1956) observed 1080 cases of acute abdomen admitted at P.M.C.H. and concluded acute intestinal obstruction as the commonest cause.Acute appendicitis constitute next position in series of Joshi et al (1970) and A.M. Ghool et al (1978) and D.U. Perforation ranked third position.

Age Incidence : To know a patient's age is helpful, since the incidence of certain condition is limited within certain age group.In this series, Peak incidence of acute abdominal emergency is in 41-50 years age group is 23% . No age is immune to acuteabdomen. Different age groups have different causes of acute abdomen. The youngest patient being one day old having imperforate anus and oldest patient is of intestinal obstruction having age 70 years.

Sex Incidence : In present series Male constituted 58% and Female 42%. Ratio between Male and Female is 1.38:1 . In similar study Staniland et al (1972) quoted an incidence of 51% males and 49% females.Ghool et al (1978) in similar study reported 72.2% males and 27.8% females which are similar to present study.

Dietetic Habit : In this series vegetarian constitutes 58% whereas non-vegetarian 42%. The ratio between vegetarian to non-vegetarian was 1.38:1.Large gut volvulus was seen commonly in vegetarian. Acute appendicitis was seen in 62.5% of non-vegetarian patients.

Social Status : This study shows the patients of different social status coming D.M.C.H. for treatment of acute abdominal emergency. Majority of cases of this series wereof lower class comprising 70% because in this area majority of people belong to lower class. 30% patients came for Middle Class.

Pain : From Table - III, it is clear that pain is predominant feature in all cases of acute abdominal emergencies (100% cases). There is great importance to careful observation of onset, distribution and character of the pain.The nature, severity, and periodicity of pain provide useful clues to the underlying cause.

Treatment : After making pre-operative diagnosis, patients were categorized into two groups :

Those patient who require immediate surgical intervention after correction of fluid and electrolyte imbalance as quickly as possible and Patients those could be observed on trial conservative treatment.In this series of 100 patients, 84 patients were subjected to surgery out of which 77% cases treated with open surgery and 09% cases treated with laparoscopic surgery and remaining 16% by conservative method. The presence of these features demands careful evaluation and a liberal policy of admission and observation. This decision to subject the patient to surgery was based on the following criteria:

Physical Finding –involuntary guarding or rigidity, increased tenderness, tense or progressive distension, tender abdominal or rectal mass with high fever or hypotension, deterioration on conservative treatment,equivocal abdominal findings with septicemia or bleeding. Persistent or increasing pain anddistension, tachycardia, successive increase in the amount of nasogastric aspirate, increase in size of sub-diaphragmatic gas shadow radiologically, increase in number of air fluids level on x ray abdomen, increasing guarding rigidity.

Tanga et al (1962) observed that mortality in 0-1 year age group and above 60 years age group in maximum. pneumoperitoneum, gross or progressive dilatation,multiple gas and air fluid levels in erect scout film of abdomen. Patients on trial conservative treatment are reassessed every hour and any deterioration may be indication for stoppage of conservative treatment.

Mortality rate of case of acute abdomen remained high, in-spite of all modern advancement in surgery, anethesia, and biochemical correction. Acute abdominal emergency some time produce real diagnostic dilemma and even most sophisticated investigations provide only peepholes. However in most cases a tentative diagnosis is arrived by careful history taking, thorough clinical examination and modern investigations. The mortality rate can be further cut down by early and accurate diagnosis for cases needing surgical intervention

V. Conclusion

Intestinal obstruction due to various pathology leading cause of acute abdomen, comprises about 45% of cases, followed by perforations 30% and then inflammation of viscus 22%.

Age-wise incidence of acute abdomen is highest in 3rd and 5^{th} decades of life, 19% and 23% respectively.

Sex incidence suggests that male comprises about 58% of cases and female Patients with vegetarian dietary habit constitutes about 58% of cases.

Majority of cases belongs to low socio-economic class(70%).

Most common manifestation of acute abdomen is pain (100%).

Mortality rate is highest among 7^{th} decades of life.

77% of 100 cases treated with open surgery with mortality 15.58% and 9% cases treated by laparoscopic surgery with mortality 0%, 16% of cases treated conservatively with mortality 18.75%.

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