VOLUME-9, ISSUE-6, JUNE-2020 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

General Surgery

A CLINICAL EVALUATION AND MANAGMENT OF INTESTINAL OBSTRUCTION AT RIMS, RANCHI

Ajay Kumar	Junior Resident, Rajendra Institute Of Medical Science Department Of Surgery, Ranchi
DR. M. Sarawagi	Profesor, Rajendra Institute Of Medical Science Department Of Surgery, Ranchi
Nilofer Ahmad*	Junior Resident, Rajendra Institute Of Medical Science Department Of Surgery, Ranchi *Corresponding Author

ABSTRACT

INTRODUCTION: Intestinal obstruction is a commonest surgical emergency faced by surgeon. It is defined as obstruction in forward propulsion of the contents of the intestine either due to dynamic ,adynamic or pseudo-obstruction . It is predisposed by varying underlying anomalies and diseases, which are difficult to define pre-operatively except postoperative adhesions and external hernias. Early diagnosis with advance technology like CECT and proper operative Management during surgery and better postoperative treatment in intensive care unite carries a good result.

MATERIAL AND METHOD: Source : Patient presented in RIMS emergency form November 2018 to October 2019.
Method : All patient of acute intestinal obstruction admitted in rims emergency, examined and investigated with proper consent. Investigation done according to proforma.

CONCLUSION: Acute intestinal obstruction is a major cause of mortality with adhesions being the most common cause. High quality surgical expertise with sound clinical judgment and early surgery intervention when needed will significantly improve survival.

KEYWORDS : intestinal obstruction, pseudo obstruction, Paralytic ileus

INTRODUCTION

Intestinal obstruction is a commonest surgical emergency faced by surgeon. It is defined as obstruction in forward propulsion of the contents of the intestine either due to dynamic ,adynamic or pseudo-obstruction . It is predisposed by varying underlying anomalies and diseases, which are difficult to define pre-operatively except postoperative adhesions and external hernias.

Early diagnosis with advance technology like CECT and proper operative Management during surgery and better postoperative treatment in intensive care unite carries a good result. Although the mortality due to acute intestinal obstruction is decreasing, but still mortality ranges from 3% for simple obstruction to as far as 30% when vascularity is compromise or perforation taken place in obstructed bowel. And ofcourse this is further influenced by the clinical setting and related co-morbidities[1]. In Present day,inindia almost 1.28% of patient is of intestinal obstruction of all surgical admission.[2]

Intestinal obstruction can be classified as[3] :

DYNAMIC			ADYNAMIC
INTRALUMINAL	INTRAMURAL	EXTRALUMINAL	Paralytic ileus Psuedo-obstruction
Faecal impaction, Foreign body, Bezoars Gallstone	Stricture Malignancy Intussusception Volvulus	Band Adhesion Hernia	

Pathophysiology of intestinal obstruction
Dynamic obstruction can be divided on basis of blood supply as[4]:
(a) Simple mechanical obstruction
(b) Strangulating obstruction.

Dynamic obstruction can be classified clinically into three types:
1. Acute obstruction favouring the small gut, with central abdominal pain, early vomiting, central abdominal distension and constipation.
2. Chronic obstruction favouring large bowel, with lower abdominal colic at first and absolute constipation and distension later.
3. Acute on chronic obstruction, which spreads from large intestine to involve the small intestine and gives early pain and constipation, followed by general distension and vomiting.

In simple obstruction, changes that takes place in the intestine, are divided into:

1. Changes in the segment above the point of obstruction

To overcome the obstruction,bowel starts vigorous peristalsis, which maycontinues for 48 hours to several days,depending on the site of obstruction.If the obstruction is not relieved, the intestine becomes fatigued and dilates,that's ultimately leads to flaccidity and paralysis. There may be the alterations in intestinal motility are secondary to a disruption of the normal autonomic parasympathetic (vagal) and sympathetic splanchnic innervation. As the bowel dilates, water and electrolytes accumulate both intraluminally and in the bowel wall itself.

2. Changes in the segment distal to point of obstruction

The intestine distal to obstruction exhibits normal peristalsis and absorption in initial few hours, but after sometimes it becomes empty at which point it contracts and becomes immobile, and remains so until the obstruction has been overcome or death ensues.

3. At the site of obstruction:

The changes which take place here depends on the type of pathology causing the obstruction.

Fluid and electrolyte losses Obstruction at the pylorus: Persistent vomiting depresses bodily nutrition,excessive loss of hydrogen ions resulting in hypochloremic ,hypokalemic metabolic alkalosis with paradoxical aciduria .

Small intestinal obstruction: Antiperistaltic reflux from the small intestine causes intestinal juices to flow backward into

the stomach , vomited along with the stomach secretions , loses large amounts of water and electrolytes but little change in acid-base balance as loss of acid from the stomach and base from the small intestine may be approximately equal especially in proximal small bowel obstruction .

Large intestine obstruction:

Fecesaccumulate , when completely filled , additional chime from the small intestine can't be accommodated then severe vomiting occur. Prolonged obstruction causes rupture of the intestine itself or dehydration and circulatory shock.

fluid loss in intestinal obstruction are which lead dehydration having following machenism:

1. Sequestration within the dilated loops of the obstructed bowel
2. Edematous bowel wall
3. Free peritoneal fluid
4. Vomiting and Ryles tube aspiration:

Electrolyte disturbances:

Sodium ions

In intestinal obstruction, Na+ loss is mainly either from vomiting or from nasogastric tube aspiration.During the first 12–24 h of obstruction, a marked depression of flux from lumen to blood occurs of sodium and consequently water in the distended proximal intestine. After 24 h, sodium and water move into the lumen, contributing further to the distention and fluid losses. The main deleterious effectsof hyponatremia were development of loss of plasma volume,which leads to progressive haemoconcentration, hypovolemia and oliguric renal failure.

Potassium ions

The vomitus contains double the concentration of plasma potassium.Ryles tube aspiration and IV fluid free from K+ leads to dilution of potassium in the blood and there is continuous excretion of K+ in the urine. So hypokelemia causes muscular weakness,atonia and ECG changes.It may also cause paralytic ileus ,cardiac arrhythmia and death.

Cardinal features of intestinal obstruction are:

1. Colicky abdomen pain
2. Nause and vomiting
3. Abdomen distension
4. Absolute constipation(obstipation)
5. Dehydration

MATERIAL AND METHOD

Source : Patient presented in RIMS emergency form November 2018 to October 2019.

Method : All patient of acute intestinal obstruction admitted in rims emergency, examined and investigated with proper consent. Investigation done according to proforma.

AIMS AND OBJECTIVES OF STUDY:

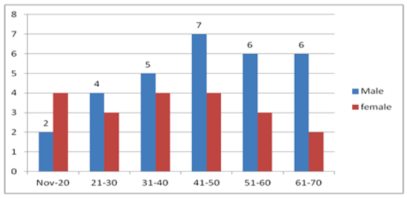
- 1. To study the various causes of intestinal obstruction.
- 2. To study the age and sex distribution.
- 3. Modalities of treatment required.

RESULT :

1. table showing age and sex distribution

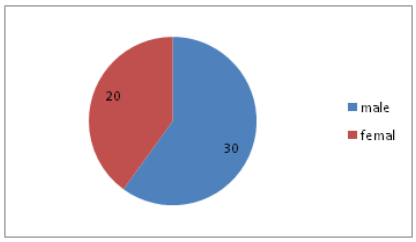
Age	Male	Female	total
11-20	2	4	6
21-30	4	3	7
31-40	5	4	9
41-50	7	4	11
51-60	6	3	9
61-70	6	2	8
total	30	20	50

From the above table it is clear that incidence of intestinal obstruction is most common in age between 40yr to 60yr. More affected population is male with male female ratio is 3:2.



Graph showing age and sex distribution

2. Pi chart showing sex distribution

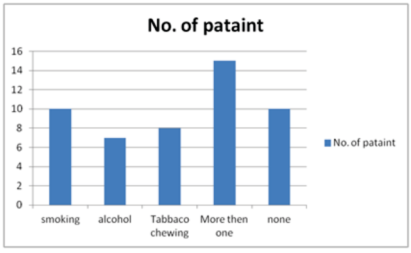


In this study male female ratio found to be 3:2

3. Incidence in relation to personal habits

Table showing personal habits that may be a risk factor:

Habits	No. of pataint	percentage
smoking	10	20
Alcohol	7	14
Tabbaco chewing	8	16
More then one	15	30
None	10	20

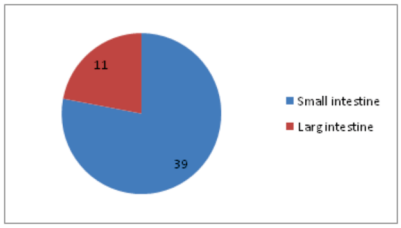


Graph showing risk factor of intestinal obstruction

From this details it is clear that incidence of intestinal obstruction is multifactorial. And more common in tabbaco and alcohol addicted pt.

4. Table and Pie chart showing site of obstruction

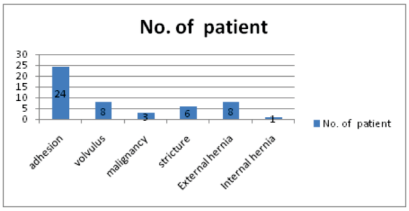
Site		
Small intestine	39	78
Larg intestine	11	22



5. Table showing incidence based on aetiology

Aetiology	No. of patient	Percentage
adhesion	24	48
volvulus	8	16
malignancy	3	6
stricture	6	12
External hernia	8	16

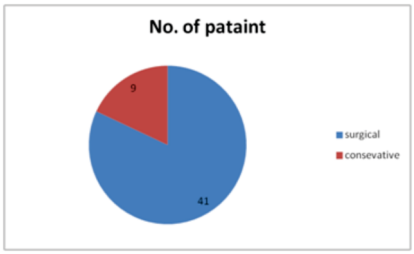
Internal hernia	1	2
total	50	100



From this table indicates most common couse of obstruction is adhesion.

6. Table showing modality of management

Modality of m/n	No of pt	Percentage
Surgical	41	82%
Conservative	9	18%



From above data indicates that in our study 82% of pt. treated surgically and only 18% managed conservatively.

CONCLUSION :

Clinical study of 50 cases of intestinal obstruction was done at RIMS ,ranchi, during November 2018 to October 2019.

- Intestinal obstruction remains still an important surgical emergency.
- Late presentation of the patient often with complications very hard to managed and very challenging to the surgeons for management.
- Patients with a clinical picture of intestinal obstruction needs vigorous correction of fluid and electrolyte.
- Postoperative adhesions are the common cause to produce intestinal obstruction as abdominal and aspelvic surgeries are on rise specially in female patient.
- Clinical, radiological and operative findings put together can bring about the best and accurate diagnosis of intestinal obstruction.
- Majority of the patients of intestinal obstruction needs surgical intervention for relief.
- Early operation is necessory to avoid the development of peritonitis and systemic sepsis associated with multi-system organ failure.

SUMMARY

Acute intestinal obstruction is a major cause of mortality with adhesions being the most common cause. High quality surgical expertise with sound clinical judgment and early surgery intervention when needed will significantly improve survival.

REFERENCES:

1. Sctt G. Houghton, Antonio Romas De la Medina, Michael G. Sarr, Maingot's Abdominal Operation, eleventh ed. McGraw Hill 2007:479-508
2. www.medicalsciencejournal.com Volume 3; Issue 11; November 2017; Page No. 25-29
3. Norman S. Wlliams, P. Ronan O'Connell, Andrew w. Mc.Caskie, Baily And Love's Short Practice Of Surgery 27th edition, CRC Press, 2018: 1280-1281
4. Norman S. Wlliams, P. Ronan O'Connell, Andrew w. Mc.Caskie, Baily And Love's Short Practice Of Surgery 27th edition, CRC Press, 2018: 1284-1285