



A PROSPECTIVE CLINICAL STUDY ON ADHESIVE INTESTINAL OBSTRUCTION IN TERTIARY CARE CENTRE TIRUPATHI

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ABSTRACT Adhesive intestinal obstruction is defined as an obstruction in forward propulsion of the contents of the intestine due to adhesions formed due to previous surgery /trauma / any inflammation. Intestinal obstruction is one of the most common surgical emergencies which should be diagnosed urgently and promptly treated to prevent complications. Success in treatment of patients with adhesive intestinal obstruction depends largely on early diagnosis, timely fluid resuscitation , skillful operative management, proper surgical technique and intensive postoperative treatment. Out of 134 intestinal obstruction cases admitted in SVRRGGH , 54 cases are due to adhesions (40%) leading to intestinal obstruction. Majority of patients with adhesive intestinal obstruction were presented within 5 yrs (64.4%) of previous surgery ,30-40 yrs age group (18%), pain abdomen(100%) as common symptom, high cases with history of laparotomy for peritonitis (35%) with male preponderance of 55.5% cases. In my study the most common cause of death was septicemia. Less tissue handling ,fast surgery& appropriate antibiotics needed to prevent future adhesions.

KEYWORDS :

INTRODUCTION

- Intestinal obstruction is a partial or complete blockage of the bowel. The contents of the intestine cannot pass through it.
- Either the small bowel or large bowel may be affected.
- Causes of bowel obstruction include adhesions, hernias, volvulus, endometriosis, inflammatory bowel disease, appendicitis, tumors, diverticulitis, ischemic bowel, tuberculosis, and intussusception
- Adhesions develop either due to inflammatory process in the peritoneal cavity or due to previous surgeries.
- Large pieces of ligated tissue, tissue ischaemia , inflammation, left necrotic material are strong stimulants to adhesion formation.
- Adhesion leads to angulation of bowel, creating a kink, or by tightly applies around bowel leading to acute intestinal obstruction

AIM

To completely evaluate the Adhesive Intestinal obstruction cases in Tertiary care center, Tirupati.

OBJECTIVES

- To study the clinical presentations of various causes leading to Adhesive intestinal obstruction.
- To study the lines of management of various causes leading to Adhesive intestinal obstruction.
- To study morbidity and mortality of Adhesive intestinal obstruction cases admitted in tertiary care hospital Tirupati.

METHOD OF STUDY

- **Study design :** Prospective study
- **Study subjects :** The present study included patients admitted in SVRRGGH department of general surgery tirupati and diagnosed as adhesive intestinal obstruction during the time of presentation.

INCLUSION CRITERIA

- Patients age above 18 years.

Patients presenting with symptoms of pain & distention of abdomen, constipation with or without vomiting and diagnosed as acute intestinal obstruction

EXCLUSION CRITERIA

- Patients age below 18 years.

- Patients who not given consent.
- Prisoners and mentally retarded patients.
- Other than adhesive intestinal obstruction cases, remaining causes leading to intestinal obstruction are excluded.

STUDY SETTING

- The study was conducted in the department of general surgery, SVRR government general hospital, tirupati.

STUDY PERIOD

- The study was conducted one year from the time of approval of Institutional ethical committee i.e., from July 2017 to June 2018.

STUDY METHODS

- Demographic data (age, sex, occupation), complete history, clinical examination, investigations as per the proforma for diagnosis of acute intestinal obstruction .
- Operative findings , post operative course, complications & their management.
- Subsequent morbidity & mortality will be recorded.

RESULT

- Of total 126 cases of intestinal obstruction , admitted in SVRRGGH TIRUPATI , 54 cases are due to adhesive intestinal obstruction constituting about 42.8%.
- Adhesive intestinal obstruction accounts for second most common cause for intestinal obstruction after obstructed hernias (44%) in SVRRGGH.

Table 1: Symptoms and signs

Symptoms and signs	No. of Cases	Percentage
Pain Abdomen	54	100%
Vomiting	33	61%
Distension	30	55.5%
Constipation	27	49%
Bloating	15	28%

Table 2: Management

Management	No. of Cases	Percentage
Adhesiolysis	33	61.2%
Adhesiolysis +Resection & anastomosis	10	18.5%
Adhesiolysis + ileostomy	5	9.2%
Conservative treatment	6	11.1%

Table 3: H/o previous surgery

Cases	No. of Cases	Incidence Percentage
With previous abdominal surgery leading to adhesions.	43	79.6%
With out previous surgery ,presenting with adhesions	11	20.4%

Table 4: Previous surgeries leading to adhesions

SURGERY	No. of Cases	Percentage
Laparotomy for Perotinitis	15	35%
Laparotomy for abdominal injury	6	14%
Appendectomy	4	9%
Incisional hernia repair	6	14%
Hysterectomy	7	16%
Caesarian section	2	5%
Tubectomy	3	7%
TOTAL	43	

Table 5: Mortality

Mortality	No. of cases	Percentage
Cured	51	94.5%
Death	3	5.5%

DISCUSSION

- Adhesive intestinal obstruction is a common life threatening surgical emergency all over the world presenting as acute abdomen and requiring surgical intervention.
- 54 patients between 18 to 80 years of age admitted to the surgical wards with provisional diagnosis of adhesive intestinal obstruction were taken for this study. Fuzan et al study found that the adhesions contributed upto 42.2% for intestinal obstruction which is similar to my study (42.8%).

Table 6: Comparison of etiology (most common cause of obstruction) with other studies

Cause	Khan JS et al	Malik AM et al	Playforthe et al	Present study
Adhesions	49%	41%	54%	42.8%
Obstructed	34%	19%	23%	40%
Hernia				

- The present study showed maximum incidence in the age group 31-40 years (33.4%) followed by 18-30 years (17%) and 51-60 years age group (17%).
- In a study conducted by Deshmukh SN and Maske AN, peak incidence was seen in the age group 51-60 years (22%) followed by 61-70 years (18%) of age which is different to my study.
- Adhikari S et al and Khan JS et al series shows maximum incidence in the age group of 31-40 years, which is similar to my study.
- The present study shows 1.2: 1 male to female ratio ,which is similar to study conducted by Ullah et al who reported ratio of 1.6:1.
- Jahangir Sarwar Khan et al study, Deshmukh SN study, and my present study showed pain abdomen as chief complaint in all cases (100%).
- Among previous surgeries most common surgery leading to adhesions was laparotomy for peritonitis followed by hysterectomy in my study.
- The surgical management in the present study included release of adhesions, resection and anastomosis, resection and ileostomy.
- In the present study, wound infection was the most common post operative complication similar to what was seen in the study done by Jain et al.
- Out of 54 cases, 3 died following surgery for intestinal obstruction. causes of death were
 - Septicemia (2 cases)
 - ARDS due to respiratory tract infection. (1 case)
- In the present study, mortality rate was 5.5% which is less when compared to studies done by Khan JS et al (7%) and Adhikari et al (7.35%).
- The decrease in overall mortality is due to better understanding of patho-physiology of obstruction, improvement in resuscitative and supportive management, early and aggressive surgical therapy in combination with improved technique in anaesthesia.
- Several strategies for adhesion prevention have been tried, however the only therapy with some success has been the use of

hyaluronan based agents such as Seprafilm and oxidised regenerated cellulose.

- However its effect in reducing incidence of small bowel obstruction remain less well defined.

Table 7: Mortality rates in various studies

Khan JS et al	Moto MS et al	Adhikari et al	Present study
7%	19%	7.3%	5.5%

CONCLUSION

- Best practise to reduce unnecessary adhesion formation is meticulous surgery with care taken not to allow drying of peritoneal cavity and keeping the size of ligated pedicles to a minimum.
- Preferring laparoscopy than open procedure in suitable cases, appropriate antibiotics & minimal use with exposure of peritoneum to foreign bodies may help to reduce postoperative adhesion incidence.
- More research has to be done for creation of adhesion preventive barriers with good success.

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