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General Surgery

A PROSPECTIVE STUDY ON ADHESIVE INTESTINAL OBSTRUCTION IN TERTIARY CARE CENTRE KURNOOL

Dr. M. Chitti Babu M.S Assistant Professor Of General Surgery, Kurnool Medical College, Kurnool

Dr. R. Veeraiah* Junior Resident, Dept. of General Surgery, Kurnool Medical College, Kurnool
*Corresponding Author

Dr. SBG. Praveen Kumar Reddy Junior Resident, Dept. Of General Surgery, Kurnool Medical College, Kurnool

Dr. B. Madhu Naik Junior Resident, Dept. Of General Surgery, Kurnool Medical College, Kurnool

ABSTRACT

BACKGROUND: Adhesive intestinal obstruction is defined as a obstruction in forward propulsion of the contents of the intestine due to adhesions formed previous surgery/ trauma / inflammation, intestinal obstruction is one of most common surgical emergencies which should be diagnosed urgently and promptly treated to prevent the complications. Success in treatment of patients with adhesive intestinal obstruction largely depends on fluid resuscitation sand early diagnosis, skillful operative management proper surgical technique and intensive postoperative management. Out of 148 cases admitted in GGH, Kurnool, 68 cases (46%) are due to adhesions leading to intestinal obstruction. Majority of patients with adhesive intestinal obstruction were presented with in 5 years of previous surgery , 30 – 40 years age group (18%) ,pain abdomen (100%) as common symptom , high cases with previous history of laparotomy for peritonitis (51%) with male predominance of 55% cases. In my study septicemia was the most common cause of the death. Fast surgery, less tissue handling and appropriate antibiotic needed to prevent future adhesions.

AIM: To completely evaluate the Adhesive Intestinal obstruction cases in Tertiary care center, Kurnool.

OBJECTIVE: 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 Adhseive intestinal obstruction cases admitted in tertiary care hospital Kurnool.

KEYWORDS : Intestinal Obstruction, Adhesiolysis, Peritonitis, Laparotomy Incision.

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, inflamatory bowel disease, appendicitis, tumors, diverticulitis, ischemic bowel, tuberculosis, and intussusceptions. 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.

METHODS OF STUDY :

- Study design : Prospective study
- Study subjects: The present study included patients admitted in GGH, Kurnool Department of General Surgery Kurnool and diagnosed as adhesive intestinal obstruction during the time of presentation.

INCLUSION CRITERIA :

- Patients age more than 16 years
- Patients presenting with symptoms of pain & distention of abdomen, constipation with or without vomiting & diagnosed as acute intestinal obstruction .

EXCLUSION CRITERIA:

- 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, government general hospital, Kurnool

STUDY PERIOD:

- The study was conducted one year from the time of approval of Institutional ethical committee i.e.., from July 2018 to June 2019.

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 148 cases of intestinal obstruction, admitted in GGH Kurnool, 68 cases are due to adhesive intestinal obstruction constituting about 46%. Adhesive intestinal obstruction is the most common cause of intestinal obstruction 2nd being obstructed hernias.

Table 1: Symptoms and signs

Symptoms & signs	No. of cases	percentage
Pain abdomen	68	100
Vomiting	50	73
Distention	42	61
Constipation	32	47
Bloting	18	26

Table 2: Management

Managment	No. Of Cases	Percentage
Adhesiolysis	40	58
Adhesiolysis+Rection&Anastamosis	10	14
Adhesiolysis+Iliostomy	6	8
Conservative	12	17

Table 3: H/o previous surgery

cases	No cases	Incidence percentage
With previous abdominal surgery leading to adhesions	60	88
Without previous surgery leading to adhesions	8	12

Table 4: Previous surgeries leading to adhesions

Surgery	No. of cases	percentage
Laprotomy for peritonitis	31	52
Laprotomy for abdominal injury	8	13
Appendicetomy	4	6

Incisional hernia repair	5	8
Hysterectomy	6	10
Caesarian section	4	6
Tubectomy	2	3

Table 5: Mortality

Mortality	No. of cases	Percentage
Cured	63	92
Death	5	8

DISCUSSION :

Adhesive intestinal obstruction is a common life threatening surgical emergency all over the world presenting as acute abdomen and requiring surgical intervention. 68 patients between 16 to 80 years of age admitted to the surgical wards with provisional diagnosis of adhesive intestinal obstruction were taken for this study. The present study showed maximum incidence in the age group 31-40 years (33.4%) followed by18-30 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 cheif 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 68 cases, 5 died following surgery for intestinal obstruction. Causes of death were : (1) Septicemia-4, (2) A*rds* respiratory tract infection-4. In the present study, mortality rate was 7.5% which is same 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 oxidized regenerated cellulose. However its effect in reducing incidence of small bowel obstruction remain less well defined.

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

Cause	Khan js et al	Malik am et al	Playforth et al	Present study
Adhesions	49	41	54	46
Obstructed hernias	34	19	23	34

Table 7: Mortality rates in various studies

Khan js et al	Moto ms et al	Adhikari et al	Present study
7%	19%	7.3%	7.5%

CONCLUSION :

- Best practice 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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