Original Research Paper

Volume-9 | Issue-1 | January-2019 | PRINT ISSN - 2249-555X

General Surgery

A PROSPECTIVE CLINICAL STUDY OF LAPROSTOMY AND OUTCOMES

Dr. Praveen kumar*

Assistant professor of surgery M.S general surgery, Osmania medical college and hospital Afzalgunj, Hyderabad *Corresponding Author

ABSTRACT

INTRODUCTION: Laparostomy is the process by which the fascial edges of the peritoneal cavity are left open without closure after laparotomy intentionally and hence often called OPEN ABDOMEN[1] in cases such as feacal peritonitis, biliary peritonitis and gangrenous bowel. The abdominal contents are exposed and protected with a temporary coverage. Laparostomy is currently the treatment of choice in abdominal compartment syndromes. Other indications include damage control laparotomy in poly trauma patients

AIMS: To know the actual incidation of laparostomy in patients with advanced peritonitis, significance of laparostomy in reducing post operative morbidity,reducing post operative mortality.To reduce the intra operative time for the first and re-look surgery in advanced peritonitis patients.

PATIEMTS AND METHODS: All patients who underwent laparostomy from November 2014 to December 2016 at our institute (Osmania General Hospital) in the Department of Surgery and meeting the inclusion criteria were included in the study. Inclusion Criteria: Patients of 16-65 years of age and both sexes.

RESULTS : 18 patients were included of which 15 were ,a;se and 3 were female , 8 had gross contamination, 4 long segment gangrenes , 4 cases with obstruction were primary closure of abdomen was not considered safe, 2 were EC fistula , 2 patients succumbed to death.

Conclusion : Laparostomy or open abdomen is a useful emergency measure in certain conditions where there is a need for re-exploration for abdomen and cannot be closed due to gross oedema and contamination. It reduces operative time and also facilitates re-look operations. It also facilitates drainage of Intra peritoneal infected fluid and necrotic material

KEYWORDS

INTRODUCTION:

Laparostomy is the process by which the fascial edges of the peritoneal cavity are left open without closure after laparotomy intentionally and hence often called OPEN ABDOMEN[1] in cases such as feacal peritonitis, biliary peritonitis and gangrenous bowel. The abdominal contents are exposed and protected with a temporary coverage. The open abdomen (OA) procedure is one of the greatest surgical advances in recent times and may have enormous application in the daily management of critically ill surgical patients. The OA may be a useful option for treating patients with abdominal sepsis. After trauma or severe sepsis, the abdominal cavity needs to be regularly inspected to ensure that there is no further contamination or spreading of the gangrene in cases of doubtful viability of the gut. In 2014 the definite data from the CIAOW study (Complicated intra-abdominal infections worldwide observational study) was published. The study describes the epidemiological, clinical and treatment profiles of complicated intra-abdominal infections in a world-wide context, the overall mortality rate was 10.5%. Analyzing the subgroups of patients with severe sepsis and septic shock at hospital admission, the mortality rate reached 36.5%. 70% of patients with peritonitis developed a severe sepsis or septic shock. Overall mortality in diffuse peritonitis have varied from 'less than 10%' (Till, 1954) to 33-3 %. In severe intra-abdominal infections and peritonitis, the mortality rate may increase to greater than 30-50%[2]. . Finally the impending development of the abdominal compartment syndrome also influences the outcome in these patients. The recognition of these factors lead to the evolution of the laparostomies during the 1970's. However the morbidity associated with the procedure may be 25%, the management of the frankly open abdomen is a challange in its own right. Common complications include fluid imbalance, bleeding, contamination of the abdominal cavity, fistula formation and inadvertent damage to the bowel. Several techniques of laparostomy have been advocated. The simplest and possibly the most cost effective is to apply a plastic urosac bag with suturing all around to the fascia or skin. This prevents evisceration and helps isolation from abdominal bandages and allows easy inspection of viscera through it.

MATERIALS AND METHODS:

Data source: All patients who underwent laparostomy from November 2014 to December 2016 at our institute (Osmania General Hospital) in the Department of Surgery and meeting the inclusion criteria were included in the study

Study design: A prospective study performed on 12 patients who underwent laparostomy , outcomes of the patient and related complications.

Inclusion Criteria:

1. Patients of 16-65 years of age and both sexes.
2. Cases include

-polytrauma with severe contamination and edematous bowel
-mesenteric ischemia with gangrenous intestine.
-severe sepsis due to neglected bowel perforation.

Exclusion Criteria:

Patients of extremes of age (<16 and >65years) Patients unfit for Laparostomy due to severe medical illness.

RESULTS :

18 patients were included of which 15 were male and 3 were female , 8 had gross contamination, 4 long segment gangrenes , 4 cases with obstruction where primary closure of abdomen was not considered safe, 2 patients presented with EC fistula

No of cases : 18

Table 1: sex ratio

Males	15[83.3%]
Females	3[16.6%]

Table 2 : duration at presentation after symptoms started

0-3 days	6(33.3%)
4-6 days	4(22.2%)
7-9 days	4(22.2%)
10-12 days	2(11.1%)
13-15 days	1(5.5%)
16-18 days	0(0%)
19-21 days	1(5.5%)

Complications: EC Fistula:2(11.1%), Anastomotic leak:2(11.1%), Death:3(16.6%)

DISCUSSION :

The goal of Laparostomy is the same as in trauma surgery: the initial emergency operation is to be kept as short as possible and focused on limiting the physiological insult.[3] The concept of Laparostomy is based on a sequence of key phase: short initial surgery, ICU for resuscitation, and return to the operating room as soon as normal or near-normal physiology is reached for the definitive operation. In trauma patients, this multistage approach is first of all performed to avoid or correct the lethal triad of hypothermia, acidosis, and coagulopathy, particularly well suited in patients with critical hemodynamic conditions, excessive peritoneal edema, difficulty to obtain a definitive control of the source of sepsis, incomplete debridement of necrotic tissue, uncertainty about bowel viability, uncontrolled bleeding, and massive abdominal wall loss. The goal of Laparostomy in nontrauma patients is damage control and reduction of mortality.

The decision to re-explore the abdomen is made during the initial surgery. The patient is programmed to undergo a repeat laparotomy after 48 hours unless the septic foci is fully controlled. Out of 18 cases , 17 cases were taken for relook and closure under general anesthesia after 3-6 days depending on patient physiological condition. Out of 18 cases 17 cases we are able to approximate fascial edges during relook laparotomy and other one case was died.Three patients died postoperatively due to uncontrolled sepsis and anastomotic leak. Two patients developed EC fistulas after 7 days of anastomosis of bowel which was closed spontaneously after 3 weeks. Most common complication was electrolyte imbalance, which occurred in 5 (27.7%) patients , managed with daily dressings and electrolyte replacement. 2 patients (11.1%) developed anastomotic leak, which was managed conservatively. Laparostomy has the advantages of reducing sepsis, decreases operative time in moribund patient at primary surgey and also allows planned relook after a few days, by that time patient general condition will have improved and sepsis is controlled. abdominal wall wound infection also significantly reduced as abominal wall is left open for free drainage. primary anastomosis of bowel may be carried in most of patients as bowel wall edema decreases significantly after 3-5 days which eliminates need for stomas and related complications.

CONCLUSION:

Laparostomy or open abdomen is a useful emergency measure in certain conditions where there is a need for re-exploration for abdomen and cannot be closed due to gross oedema and contamination. It reduces operative time and also facilitates re-look operations. It also facilitates drainage of Intra peritoneal infected fluid and necrotic material. Despite its association with a high morbidity, long hospital stay and mortality. Laparostomy can be done using simple available resources and doesnot require special equipment and they can be managed in post operative ward or ICU depending on the patient condition whether to go for laparostomy closure or closure of abdomen with planned relaparotomy in a given situation is a difficult task which requires experience and availability of resources. However accurate and timely identification of patients who need a laparostomy is a very important. At present there are no clinical or criteria to select patients for laparostomy or open abdomen.

REFERENCES :

1. Steinberg D. On leaving the peritoneal cavity open in acute generalized suppurative peritonitis. Am J Surg. 1979;137:216–220. doi: 10.1016/0002-9610(79)90148-X
2. Laparostomy: why and when? Critical Care. 2010; 14(2)216
3. Role of Damage Control Surgery in the Treatment of Hinchey III and IV Sigmoid Diverticulitis : A Tailored Strategy- Roberto Ciroccho.