VOLUME-6 | ISSUE-3 | MARCH - 2017 • ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

AN OBSERVATION ON CASES OF ENTEROCUTANEOUS (FAECAL) FISTULA AFTER EXPLORATORY LAPAROTOMY

General Surgery

KEYWORDS: Enterocutaneous Fistula, Laparotomy, Malnutrition, Small bowel

Dr. Deepak Pankaj	Senior Resident, Department of General Surgery- Emergency, Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India
Dr. Vikram Jha	Junior Resident, Department of General Surgery, Katihar Medical College, Katihar, Bihar, India
Dr. Abhishek Ranjan	Junior Resident, Department of General Surgery, Katihar Medical College, Katihar, Bihar, India
Dr. Indudhar Narayan Jha	Professor, Department of General Surgery, Katihar Medical College, Katihar, Bihar, India

ABSTRACT

Faecal fistula possesses a great challenge for the treating surgeon as it is s significant cause of morbidity and mortality following abdominal surgery. Material and Methods: Twenty two cases of faecal fistula were included in this series that developed after exploratory laparotomy either emergency or elective in Department of Surgery, Katihar Medical College & Hospital, Katihar over a period of one year. Observation: Number of males were slightly more than woman in the study with ratio being 1.2 : 1. Maximum number of patients were in age group 16 to 35 years . Conservative treatment was carried out in 68.18% of the cases while operative interventions were carried out in 31.82% of cases. Mortality rate was 27% in all cases of enterocutaneous fistula. Conclusions: A favorable outcome in patients with enteroctaneous fistula depends on a multimodality approach towards the patient which involves wide spectrum antibiotics coverage for control of sepsis, adequate nutritional support, maintenance of fluid-electrolyte balance and skin care.

INTRODUCTION

A fistula is an abnormal communicating tract between two epithelial surfaces. A fistula between small or large bowel and the skin is called Enterocutaneous(ECF) fistula or faecal fistula which results as a consequence of surgery or disease or both. An ECF can arise due to disruption of gastrointestinal tract anywhere from duodenum, jejunum, ileum, colon or rectum. Physiologically these are classified as

-

1. Low volume fistula <200 mL/24 hours.
2. Moderate volume between 200 and 500 mL/24 hours.
3. High volume >500 mL/24 hours.[1]

Spontaneous closure occurs in approximately 30% of all type of fistulas within six to seven weeks.[2] Most of the proximal small bowel fistulas are high output fistulas and do not show tendency for spontaneous closure while low output fistula has high rate of spontaneous closure.[3] Various studies have reported higher mortality rates as high as 65% in patients with ECF but this has decreased drastically to around 20% in modern days with advanced imaging modalities, proper nutritional support, electrolytes balance, blood transfusion and antibiotic coverage.[4,5] This aim of the present study was carried out to study surgical profile of patients, various management modalities and outcome of types of enterocutaneous fistula in kosi region of Bihar.

MATERIAL AND METHODS

Cases for the present study was taken from the patients admitted in the Department of General Surgery, Katihar Medical College & Hospital over a period of one year between 2015 and 2016. The study included only those patients who developed faecal fistula after exploratory laparotomy in Katihar Medical College & Hospital.

The study of each patient developing post operative faecal fistula was carried out in three phases in addition to proper history and general examination.

The headings included:-
Pre operative and operative phase
Post operative phase
Management including both conservative and surgical interventions wherever necessary

OBSERVATION

A total number of 22 patients were included in this study. Only those cases of faecal fistula were included in the series that developed after exploratory laparotomy either emergency or elective in Department of Surgery, Katihar Medical College & Hospital, Katihar. Male patients (54.6%) were slightly more than females in the study (45.4%) with ther ratio being 1.2 : 1 in the study. Maximum number of patients were in age group 16 – 35 years followed by age group36 to 50 years. Least number of patients were of age group over 65 years.

Mortality rate was higher in age group <15 years and 65 years age and above with percentage being 67% and 50% respectively in their age group. In most of the cases (72.7%), emergency surgery was performed and mortality rate was higher in emergency surgery cases as compared to elective surgery cases which were performed in 27.3% of cases. Small bowel was the most common site of fistula accounting for almost 64% of cases followed by gastroduodenal(23%) and fistulas in large bowel(13%). Out of 12 cases of high output fistula, 4 died(33%) which were more than 10 cases of low output fistula in which 2 patients died (20%). Most common complications were malnutrition, skin excoriation, electrolyte imbalance and hypoalbuminemia. 15(68.18%) cases of ECF were managed by primary non operative treatment (conservative) in which only 2 patients died while operative measures were taken in 7(31.82%) patients in which 4 died.

DISCUSSION

Usually arising as an unexpected and distressing complication of abdominal operations specially done under emergency conditions, enterocutaneous fistula is a cause of variable degree of discomfort to the patient and it also affects the mental status of the patients with various complications and associated mortality. Males were most commonly affected in our study which is also similar to study of other authors.[6] In our study out of the three patients below fifteen years of age two ultimately died. Their death can be attributed to the fact that their body reserves were low and malnutrition can occur with frightening rapidity. In both the cases that we lost there was severe malnutrition and there was copious fistula output.The rest of the mortalities were almost evenly divided among all the age groups except in the age group of sixty five and above in which out of the two patients, we lost one giving a mortality rate of 50% a rate quite in tune with Rober et al[7] who reported a 48% mortality in the same age group. In the present series gastrointestinal fistula was divided into three clinical groups according to site of origin viz gastroduodenal, small bowel and large bowel. Of the five patients with gastroduodenal

fistulas two died - a mortality of 40%. There were fourteen patients with small bowel fistulas of which one died – a mortality of 33%. Small bowel fistulas constituted the largest number (64%) followed by gastroduodenal 23% and large bowel (13%). This is in agreement with study of other workers.[8,9]

Twelve patients in our series had a high output fistula while ten patients had a low output fistula. There were four deaths in the high output fistula group (33%) and two deaths in the low output group (20%).There is universal acceptance of the fact that high output fistulas are more difficult to manage and are associated with a high mortality. Miller and Dorn observed that greater the drainage output, the more serious is the problem and prognosis.[9] Even this is in agreement with Fazio[10] who observed an increase in the mortality rates of high output fistulas (20%) as compared to low output fistulas (4.8%). Malnutrition, electrolyte imbalance, skin excoriation, wound dehiscence were the major problem in our series. Moderate malnutrition occurred in 50% of the cases while severe malnutrition occurred in 27% of the cases, 83% of all the cases with severe malnutrition ultimately died. All the workers agree that malnutrition remains a major problem in the management of fistulas. Incidences of fistula–related complications such as electrolyte disturbance, sepsis, and skin excoriation, are higher in high output fistula resulting in difficult management . The fistula healing rate for high output fistulas are also lower and mortality is higher in these patients.[11]

CONCLUSION

The present study concluded the fact that high output fistula has a higher mortality rate in comparison to low output fistula patients. Patients treated with enteral nutrition gave a comparable result as with the patient treated with total parenteral nutrition in the treatment of faecal fistula. This is very cost effective and significant to the patient considering the low socioeconomic status of the patients in Kosi region of Bihar. The emergency surgery done under lot of stress and constraints of time has a higher chances of fistula rate formation and associated mortality. Some newer drugs like Racecadotril has given encouraging result in case of faecal fistula management.

REFERENCES

1. Berry SM & Fischer JE. Classification and pathophysiology of enterocutaneous fistulas. Surg Clin North Am 1996; 76:1009–1018.
2. Cro C, George KJ, Donnelly J, Irwin ST & Gardiner KR. Vacuum-assisted closure system in the management of enterocutaneous fistulae. Postgrad Med J 2002; 78:364–365.
3. Rubelowsky J, Machiedo GW. Reoperative versus conservative management for gastrointestinal fistulas. Surg Clin North Am 1991;71(1):147-57.
4. McIntyre PB, Ritchie JK, Hawley PR, Bartram CI, Lennard-Jones JE. Management of enterocutaneous fistulas: A review of 132 cases. Br J Surg 1984;71:293-6.
5. Sitges-Serra A, Jaurrieta E. Management of postoperative enterocutaneous fistulas: The roles of parenteral nutrition and surgery.Br J Surg 1982;69:147-50.
6. Kumar P, Maroju K, Kate P. Enterocutaneous Fistulae: Etiology, Treatment, and Outcome – A Study from South India. The Saudi Journal of Gastroenterology. 2011; 17(6): 391 – 395.
7. Reber H, Roberts C, Way LW et al : Management of gastro intestinal fistulas Ann Surg 188: 460-67.
8. Rose D, Yarborough MF, Carizaro PC, Lowry SF. One hundred and fourteen fistulas of the gastro intestinal tract treated with total parenteral Nutrition surg Gynaec Obst. 1986; 163: 345-50.
9. Miller HL,Dorn BC, Post operative gastrointestinal fistulas. Am J Surg. 1968; 116: 382-85.
10. Fazio N, Coutsoftides T, Steigur F : Factors influencing the outcome of treatment of small bowel cutaneous fistula. World J Surg. 1983; 7 : 481 : 88.
11. Roback SA, Nicoloff DM. High output enterocutaneous fistulas of the small bowel. Am J Surg 1972;123(3):317-322.