Original Article ISSN (O):2395-2822; ISSN (P):2395-2814

A Study to Evaluate the Management of Enterocutaneous Fistula-A Progressive Study

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Received: April 2019
Accepted: April 2019

ABSTRACT

Background: Wounds and their management are fundamental to the practice of surgery, as any kind of surgical intervention will result in a wound. Post operative wound complication is common, but sometimes a difficult event is experienced by a surgeon. A similar situation is a faecal fistula. **Aims and objectives:** 1.To Identify various causes of fecal fistula and there management in surgical patients. **Methods:** The present study was conducted in the Department of Surgery, GMC, Jammu w-e-f 1-11-2014 to 31-10-2015. Patients admitted in various surgical units of the department were incorporated in study design. Presenting features and detailed history of the disease was recorded as per enclosed proforma. Inclusion Criteria: All patients developing faecal fistula following open/laparoscopic abdominal surgery both elective and emergency cases including Gynaecological /vascular/ thoracoabdominal/ urological surgeries. Exclusion Criteria: Pharyngeal, oesophageal, anorectal and urinary fistulas were excluded from the study. **Results:** Among twenty five patients of small bowel fistula in our series, thirteen patients had spontaneous closure within 30.7 days with the range of 14 days (a case of post LSCS faecal fistula) to 70 days (a case operated for intestinal obstruction). **Conclusion:** In the end it is concluded that faecal fistula is a post operative complication with significant morbidity and mortality in relation to patient on one side and a lot of dedicated effort in limiting the morbidity(malnutrition,electrolyte imbalance,sepsis) to be performed by a doctor on the other side with utmost care of the patient with faecal fistula.

Keywords: Anorectal , Pharyngeal, Oesophageal.

INTRODUCTION

Wounds and their management are fundamental to the practice of surgery, as any kind of surgical intervention will result in a wound. Post operative wound complication is common, but sometimes a difficult event is experienced by a surgeon. A similar situation is a faecal fistula.

Fistula is defined as an abnormal communication between two epithelised surfaces. A Enterocutaneous fistula also known as faecal fistula is referred to as a communication between the gut and the skin.

Enterocutaneous (faecal) fistula is a very serious post operative complication, associated with significant morbidity and mortality. It directly affects the patient - by increasing the risk of morbidity and mortality, the attendants - by increasing the cost of treatment and consuming their precious time, the surgeon - for whom it is a disturbing event and the Hospital - by increasing the health care cost due to prolonged hospital stay.

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MATERIALS AND METHODS

The present study was conducted in the Department of Surgery, GMC, Jammu w-e-f 1-11-2014 to 31-10-2015. Patients admitted in various surgical units of the department were incorporated in study design. Presenting features and detailed history of the disease was recorded as per enclosed proforma.

Inclusion Criteria

1) All patients developing faecal fistula following open/laparoscopic abdominal surgery both elective and emergency cases including Gynaecological/ vascular/ thoracoabdominal/urological surgeries.

Exclusion Criteria

Pharyngeal, oesophageal, anorectal and urinary fistulas were excluded from the study.

RESULTS

The present study on “A Study To Evaluate The Management Of Enterocutaneous Fistula-A Progressive Study" has been done in the Department of Surgery, Government Medical College, Jammu during the period of 01-11-2014 to 31-10-2015.

The following observations were made

Table 1: Age-Wise Distribution Of Patients

Age	Number of Patients	Percentage
10-20 years	2	6.25%
20-30 years	5	15.6%
30-40 years	6	18.75%
40-50 years	8	25%
50-60 years	4	12.5%
60-70 years	3	9.37%
70-80 years	3	9.37%
80-90 years	1	3.125%
Total	32	100%

In this study, the age of the patients ranged from 10 years (a case of appendicular perforation) to 85 years (a case of intestinal obstruction). Majority of the patients with faecal fistulas in our series were in the third decade of life.

Table 2: Sex-Wise Distribution Of Patients

Sex	Number Of Patients	Percentage
Male	23	71.87%
Female	9	28.125%
Total	32	100%

The above table shows that 71.87% of patients were males and 28.125% of patients were females.

Table 3: Showing Types Of Fistulae

S. No.	Type of Fistula	No. of Patients	Percentage
1.	Small bowel fistula	25	78.125%
2.	Large bowel fistula	7	21.875%
3.	Total	32	100%

Table 4: Showing Aetiology Of Small Bowel Fistulae

Cause	No. Of Patients	Percentage
Intestinal obstruction	9	36%
Intestinal perforation	9	36%
Trauma	1	4%
Iatrogenic	6	24%
Total	25	100%

Table 5: Aetiology Of Large Bowel Fistulae

Cause	No. Of patients	Percentage
Intestinal obstruction	3	42.85%
Iatrogenic	3	42.85%
Appendicular perforation	1	14.58%
Total	7	100%

Table 6: Showing Average Fistulous Output

S. No.	Type Of Fistula	Average Fistulous Output (Ml/Day)
1.	Small Bowel	391.2
2.	Large Bowel	142.87

Table 7: Showing Complications Of Faecal Fistulae

S. No.	Complications	Small bowel (n=25)	Large bowel (n=7)
1.	Malnutrition Moderate weight loss (7 to 11 Kg). Severe weight loss (more than 11 kg)	10(40%) 2(8%)	1(14.28%) Nil
2.	Electrolyte Imbalances	11(44%)	2(28.57%)
3.	Infection/Sepsis	5(20%)	1(14.28%)
4.	Pulmonary Complications	5(20%)	3(42.85%)
5.	Bleeding	Nil	Nil
6.	Excoriations	22(88%)	2(28.57%)

Table 8: Showing Various Investigations

Investigation	Number of patients	Percentage
Plain x-ray chest/ abdomen	32	100%
Ultrasonography	32	100%
Fistulogram	8	25%
Contrast study	12	37.5%
CT abdomen	22	68.75%

Table 9: Showing Spontaneous Closlure Of Fistulae

Type of fistula	Number of patients	Percentage
Small bowel fistula (n=25)	13	52%
Large bowel fistula (n=7)	5	71.428%
Total (n:32)	18	56.25%

Among twenty five patients of small bowel fistula in our series, thirteen patients had spontaneous closure within 30.7 days with the range of 14 days (a case of post LSCS faecal fistula) to 70 days (a case operated for intestinal obstruction). Spontaneous closure among five patients of colocutaneous fistula occurred in an average of 23 days ranging from 12 to 38 days. Over all, spontaneous closure was noted in 78.12% (n:25) of the patients in our series.

Table 10: Showing Mortality Rate

S. No.	Type Of Fistula	No. Of Patients Died	Mortality
1.	Small bowel fistula(n=25)	5	20%
2.	Large bowel fistula(n=7)	1	14.28%
3.	Total (n=32)	6	18.75%

Among thirty two patients of enterocutaneous fistula of our study, six patients died (18.75%) which included five patients of small bowel fistula (20%) and one patient of large bowel fistula (14.28%).

Table 11: Showing Causes Of Mortality

S. No	Causes of mortality	No. Of Patients died	Percentage
1.	Septicemia	4	12.5%
2.	Electrolyte imbalances/malnutrition	1	3.125%
3.	Pulmonary complications	1	3.125%

Among the six deaths of the patients of our series, four were due to septicemia, one patient died due to pulmonary complications. Death in one patient was linked to electrolyte imbalance and malnutrition. All patients who died had fistulous output more than 200 ml/day. Uncontrolled septicemia was the major cause of mortality (12.5%) in our series.

DISCUSSION

The present study on "A study to evaluate the management of enterocutaneous fistula-a

progressive study has been conducted in the Department of Surgery, Government Medical College, Jammu during the period of 01-11-2014 to 31-10-2015.

Age and sex wise distribution of patients in our study revealed that out of thirty two patients, twenty-three were males and nine were females. Their age ranged from ten years (a female with ileocutaneous fistula) to eighty five years(a female with intestinal obstruction). Majority of the patients were in their third and fourth decade of life. Age and sex pattern showed resemblance with the reports of various authors. Aguirre (1974) in his series of thirty eight patients reported eighteen females and twenty males, with an age range of 17 to 77 years. Majority of the patients were in the fifth, sixth and seventh decade of life. Similarly, Nemhauser and Brayton (1967) in their series of nineteen patients reported ten women and nine men with their ages ranging from 32 to 74 years. Hill and Bamback (1981) in a series of fifty patients reported twenty three males and twenty seven females with age ranging from 27 to 66 years.

In our series of thirty two patients with intestinal fistulae, twenty five (71.12%) had ileocutaneous fistulae and seven (21.87%) had colocutaneous fistulae. Mac Fadyen et al (1973) in his series of sixty one patients reported ten (16.40%) patients with ileocutaneous fistulae and twenty four (39.34%) patients with colocutaneous fistulae. Similarly, Bury et al (1971) in his series of thirteen patients reported two (15.38%) patients with ileocutaneous fistulae and two (15.38%) patients with colocutuneous fistulae. Rocchio et al (1974) in their series of thirty seven patients reported sixteen (43.24%) patients with small bowel fistulae and nine (24.32%) patients with large bowel fistulae. In our series, however, only 21.87% were cases of colocutaneous fistulae which is far less than that reported by many authors because of decreased incidence of surgeries for inflammatory bowel disease and complex malignancy in our study.

Among twenty five patients of small bowel fistula, nine patients (36%) operated for intestinal obstruction resulted in anastomotic breakdown and fitula formation. Fistula formation in nine (36%) patients occurred following surgery for small bowel ulcer perforation, one (4%) patients had traumatic perforations, six patients had iatrogenic perforation resulting in fistula formation. Fischer (1983) reported that roughly half of the small bowel fistulas were due to disrupted anastomosis and half were from unrecognized bowel injury. They could occur from any abdominal surgery with or without intestinal resection as was reported by Conter et al (1988). The origin of fistulas in a series from St. Mark's were small bowel in 58.6% (51.1% were following anastomotic leak), large bowel in 36.04% cases and 5.8% cases had peristomal fistulas. Crohn's disease was excluded and surgical intervention was usually the cause in majority of the patients. Iatrogenic small bowel injuries were not as frequent as were reported by other authors. However, incidence of fistula following anastomotic leak didn't coincide with the reports of other authors.

CONCLUSION

Faecal fistula is a post operative complication with significant morbidity and mortality in relation to patient on one side and a lot of dedicated effort in limiting the morbidity(malnutrition,electrolyte imbalance,sepsis) to be performed by a doctor on the other side with utmost care of the patient with faecal fistula.

REFERENCES

1. Aguirre A, Fischer JE and Welch CE. The role of surgery and hyperalimentation therapy of gastrointestinal cutaneous fistula. Ann. Surg. 1974; 180 : 393-401.
2. Alexander-Williams J and Irving M. Intestinal fistula. The American Journal of Surgery 1982;123 :535-537.
3. Allardyce DB. Management of small bowel fistulas. The American Journal of Surgery 1983 ;145 :593 -595.
4. Bambach CP and Hill GL. A technique for the operative closure of persistent external small bowel fistulas. Journal of Surgery 1981 ; 5l:477-485.
5. Berry SM and Fischer JE. Biliary and gastrointestinal fistulas. Appleton and Lange ,1997.
6. Blackett RL and Hill GL. Postoperative external small bowel fistulas. Br. J. Surg., 1978 ;65 :775-778.
7. Borison DI, Bloom AO and Pritchard TJ. Treatment of enterocutaneous and colocutaneous fistulas with early surgery or somatostatin analog. Dis. Colon. Rectum. 1992;35 : 635-639.
8. Bowlin JW, Hardy JD and Conn JH. External alimentary fistulas. Analysis of 79 cases with notes on management. Am. J. Surg., 1962 ; 103 : 6-14.
9. Broviac JW and Scribner BH. Prolonged parenteral nutrition in the home. Surg. Gynecol. Obstet., 1974 ; 139 : 24-28.
10. Bury KD, Stephen RV and Randall HT. Use of chemically defined, liquid elemental diet for nutritional management of fistulas of alimentary tract. The American Journal of Surgery 1971; 121 :174-179.
11. Byrne WH, Burke M, Fonkalsrud EW and Ament ME. Home parenteral nutrition : An alternative approach to the management of complicated gastrointestinal fistulas not responding to conventional medical or surgical therapy). J. Parenteral Enteral Nutr 1979; 3: 355-359.

How to cite this article: Gorka V, Qureshi NA. A Study to Evaluate the Management of Enterocutaneous Fistula-A Progressive Study. Ann. Int. Med. Den. Res. 2019; 5(3):SG26-SG28.

Source of Support: Nil, **Conflict of Interest:** None declared