

A Review of 25 Cases of Enterocutaneous Fistula



Medical Science

KEYWORDS : Enterocutaneous fistula, low output fistula, conservative management, surgical intervention

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ABSTRACT

OBJECTIVE: Enterocutaneous fistula is an unpleasant and troublesome complication of abdominal operations. The objective was to study common etiology for enterocutaneous fistula. The relation between the site of the fistula and its outcome. To review conservative and operative management and its influence on outcome. **MATERIALS AND METHODS:** 25 cases taken from Sheth L.G. General Hospital and Sheth V.S. General Hospital of Ahmedabad have been studied during the period of 2010 to 2013. All cases were studied according to following proforma which included etiology, the investigations carried out and management and outcome. However gastric, pancreatic, biliary and anorectal fistula and stomas were excluded from this study. **RESULTS:** Enteric perforation and Abdominal tuberculosis are common causes of fistula with commonest site is ileum. patients with low output fistula have higher chances of fistula closure (69.23%). success rate in conservative management is 62% (9/16) and in surgical intervention is 55% (5/9) and mortality rate is 44% (11/25). **CONCLUSION:** Prompt recognition Enterocutaneous of fistulas with their etiology and site are essential. Once diagnosis is established, a stepwise approach is should be followed, the basis of success in the control of infection

INTRODUCTION

Enterocutaneous fistulas are defined as an abnormal communication between a hollow organ of Gastrointestinal track. Enterocutaneous fistula classified into congenital and acquired. Acquired fistulas are further classified into post operative, traumatic and spontaneous.^[1] Prompt recognition of post operative fistulas is essential. Failure to recognize this complication or inability to manage it properly leads to septicemia, malnutrition and subsequently death. On the other hand immediate surgical repair is also associated with failure in most of the cases. Once diagnosis is established, a stepwise approach is should be followed, the basis of success in the control of infection, optimal nutritional support and optimal timing of appropriate surgical intervention.^[2,3,6,7]

MATERIALS AND METHODS

Total 25 cases have been studied during the period of 2010 to 2013. These cases were taken from Sheth L.G. General Hospital and Sheth V.S. General Hospital of Ahmedabad, Gujarat.

All cases were studied according to following proforma which included etiology, the investigations carried out and management and outcome. However gastric, pancreatic, biliary and anorectal fistula and stomas were excluded from this study.

RESULTS:

- In this study all the cases of entero-cutaneous fistula are post-operative.

Out of 25, total 17 fistulas occur in age group between 16-50 year. There wasn't any case of enterocutaneous fistula below the age of 15 years in last three years at our hospital.

• ETIOLOGY OF PERFORATION

TABLE-1

Sr. No.	Causes	Number	Percentage
1	Enteric perforation	7	28
2	Tuberculous perforation	7	28
3	Peptic perforation	3	12
4	Trauma	4	16
5	Malignancy	2	8
6	Surgical trauma	2	8

Enteric perforation and Abdominal tuberculosis are common causes of fistula in this study. surgical trauma is the least common cause of fistula.

- The commonest site of fistula in our study is ileum due to high rate of enteric fever and koch's abdomen are common etiology in this study. In present study 12 patients had high output fistula in whom common site is duodenal and jejunal while 13 patients has low output fistula in whom common site is ileum.

• TREATMENT PLAN:

In present study 16 patients treated in form of conservative line of treatment out of them 9 patients have closure of fistula (62%) rest of the 9 patients were treated by operative intervention, when patients general condition optimized out of them 5 patients had fistula closure (55%). Result show in table-2.

TABLE - 2

Management	Present Series		
	Total	Success No.	percentage
Conservative	16	9	62
Operative	9	5	55
Total	25	14	56

- Patients who had low output fistula have higher chances of fistula closure (9/13) [69.23%] compared to high output fistula (5/12) [41.66%] the patients who had high output fistula had had low incidence of fistula closure.
- Initially all the patients treated as conservative modality. Total gut irrigation is given to 14 patients Most of the patient had received total parenteral nutrition. Enteral nutrition is given to 13 patients. Lipid emulsion was given to limited patients because of cost.

• SURGICAL TREATMENT

TABLE - 3

Surgical Treatment	Number	Success	Percent
Resection and anastomosis	4	1	25%
Colostomy	1	1	100%
Excision of mature tract and closure	3	2	66%
Drainage of internal collection	1	1	100%

Table-3 shows that resection and anastomosis with adhesiolysis had low success rate when compared to excision of mature track. Three patients were allowed to mature fistulous track and later on when patient become stable definitive surgical treatments carried out shows higher rate of fistula closure.

• MORTALITY IN RELATION TO OUTPUT :

TABLE - 4

	Present Series		
	No. of Patients	No. of Patients Expired	Mortality
High	12	8	67%
Low	13	3	23%
Total	25	11	44%

Table-4 shows that patient who had high output fistula have higher incidence of mortality when compared to low output fistula. Low output had better results in terms of fistula closure.

DISCUSSION:

Enterocutaneous fistula remains a challenging problem to manage. In enterocutaneous fistula of present series revealed that most of fistula occur in age group between 36-50 year (36%) while in series by Noward A Reber and Rebert C had most of fistula occur in 50-56year(30%).^[9]

Enteric perforation and Abdominal tuberculosis were common causes of fistula and commonest site was small intestine in this study which is in line with Njeze GE, Achebe UJ et al and with E. Levy, P.Frileux et al^[4,8]. In our study 12 patients had high output fistula in whom common site is duodenal and jejunal while 13 patients have low output fistula in whom common site was ileum, this results are in line with Edmund et al study^[5] in which Low output fistulas were common. patients who had high output fistula had low incidence of fistula closure because of associated fluid-electrolyte imbalance, nutritional disorder.

Resection and anastomosis with adhesiolysis had low success rate when compared to excision of mature track. This is due to inflamed friable intestine, peritonitis, associated nutritional imbalance.^[8,5] Overall mortality rate in present study was 44% which is higher than Edmund et al study^[5](34%). patient who had high output fistula have higher incidence of mortality when compared to low output fistula. This is due to frequent fluid electrolyte imbalance and nutritional impairment. Low output had better results in terms of fistula closure. This is due to less likelihood of fluid electrolyte imbalance and malnutrition.^[8]

CONCLUSIONS:

Total 25 cases of enterocutaneous fistula in last 3 years at our hospital had studied Though the number of cases in this study are very low still some conclusions has been drawn which described below:

- Ileal perforation due to enteric fever and intestinal tuberculosis are the common causes of such fistula and later had higher rate of mortality.
- Enterocutaneous fistula is usually associated with malnutrition, fluid and electrolyte imbalance, infection and associated medical disorder contribute to higher mortality rates.
- Enteral nutritional support has been definitely low cost nutritional support.
- Associated medical disorder worsen the outcome of such fistula.
- High output fistula had definitive role in terms of high cost of treatment and higher mortality than low output fistula.
- Early surgical intervention had higher rate of failure and mortality.
- With conservative management and nutritional support in terms of intravenous fluid, TPN and enteral, and maturation of tract, control of infection shows higher rate of fistula closure spontaneously or after surgical intervention after 45-60 days.

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