



ENTEROCUTANEOUS FISTULA FOLLOWING OPEN APPENDECTOMY: A RARE CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT

Enterocutaneous Fistula (ECF) a regrettable consequence of open appendectomy surgery. Enterocutaneous fistula carries a significant risk of mortality and morbidity. The development of an Enterocutaneous Fistula can be attributed to various systemic, local, and technical errors during surgical procedure. Effective management of ECF involves controlling sepsis and enhancing nutritional status.

KEYWORDS: Enterocutaneous , Fistula , Nutrition , Sepsis

INTRODUCTION

Though rare in incidence Enterocutaneous fistula bears high mortality and morbidity. We hereby report a case of 40-year-old male, on his 16th postoperative period following an open appendectomy for acute appendicitis at an outer center, presented to the Emergency Department with complaints of foul-smelling fecal discharge and a gaping wound. The discharge was approximately 100ml per day and contained food particles that he consumed the previous day. He denies any history of fever, abdominal pain, abdominal distension, burning during urination, or shortness of breath. His bowel and bladder habits are within normal limits. He also denies any history of weight loss, cough, changes in bowel habits, rectal bleeding, palpable masses, or exposure to radiation. There is no history of comorbidities such as hypertension, diabetes, tuberculosis, or any neoplasms. General physical

examination was normal, and he was hemodynamically stable. The abdomen was soft, non-tender, and there was an infected wound with feculent discharge at the right paraumbilical region (Figure 1). The rest of the examinations were within normal limits. Routine baseline investigations showed leukocytosis of 14,000 cells/mm³, and all other parameters were within normal limits. X-ray showed a few dilated bowel loops, and ultrasonography showed a heterogeneous hypoechoic area of collection measuring about 3cm x 3cm with internal echoes and no internal vascularity in the right iliac fossa, likely an infected collection with inflamed adjacent bowel loops. There were a few subcentimeter mesenteric lymph nodes and no sizable collection around the drain tip with post-appendectomy status. He was then admitted to the ward and managed conservatively with IV antibiotics and analgesics. Our main target was to prevent sepsis, improve the nutritional status of the patient, perform daily wound dressing, and estimate daily stoma output. Since the drain was non-functional, it is removed on the second day of admission. The wound swab showed growth of E. coli, and the antibiotic was adjusted accordingly. Wound dressing was done three times a day, and the output was measured by applying a permanent stoma bag (Figure 2). His symptoms improved, and the stoma out-put decreased from the 5th day of admission, so he was discharged on oral medication with the expectation of spontaneous healing of the fistula. He was advised to follow up after 14 days. He visited the Outpatient Clinic on the 16th day of discharge with very little discharge and a healing wound. He underwent ultrasonography of abdomen and peviswas done to look for intraabdominal collection which showed no significant collection so planned for expectant management for spontaneous closure.



Figure 1: Infected wound over right iliac fossa, post appendectomy with feculent discharge



Figure2: wound dressing and stoma bag application to measure output

DISCUSSION:

The unfortunate sequelae of appendectomies are enterocutaneous fistula, as per the work by Royster [1]. Enterocutaneous fistula is a catastrophic and rare abdominal postoperative complication with a mortality rate as high as 10 to 15%, or even up to 39% according to some authors [2,3]. Leakage from the appendiceal stump, neoplasm of the appendix and/or cecum, infective bowel conditions (e.g., tuberculosis), inflammatory bowel disease (e.g., Crohn's disease), and distal obstruction may be the factors responsible for fistula formation [4,5]. Technical errors like unnoticed enterotomy and anastomosis disruption due to excessive tension or compromised blood supply are contributory factors [6]. The role of purse-string suture at the base of the appendix is still controversial; however, some other authors claim purse-string sutures as the main contributory factor in the development of fecal fistula [7]. Management of ECF has always been a challenge and dilemma in general surgical practice [8]. The main principle behind the management of ECF is to enhance spontaneous closure [9]. The management goal is to aim for a "controlled fistula," which means without evidence of sepsis or localized infection [10]. Most fecal fistulae tend to respond to conservative treatment provided that there is no underlying pathology

and distal obstruction. Non-operative management includes vacuum-assisted closure [11] and fistuloscopy with fibrin glue injection [12]. A 4-6 week sepsis-free period with adequate nutrition is usually the desired period for surgery. Fistula tract excision and segmental resection of the involved bowel with end-to-end anastomosis are different modalities of management [13,14]. The closure rate can be increased and recurrence can be decreased if surgery is delayed and the patient's nutritional status is improved [15, 16].

CONCLUSION:

Enterocutaneous fistula carries a significant risk of mortality and morbidity. Various factors, including systemic issues, local factors-, infection, and errors, can contribute to the formation of a fistula. Effective management of sepsis and improving nutritional status can help facilitate spontaneous closure. Surgical intervention is only considered if there are no signs of natural healing. Both surgical and non-surgical approaches, such as vacuum-assisted closure and closure using fibrin glue, may be attempted.

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