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Case Report

Enterocutaneous Fistula Secondary to Complicated Appendicitis in Children: Case Report

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Received: February 23, 2023; **Published:** March 12, 2023

Abstract

Acute complicated appendicitis is an uncommon cause of spontaneous enterocutaneous fistula. A case of ruptured appendicitis presenting as an enterocutaneous fistula in an 8-year-old boy is presented.

Keywords: *Enterocutaneous Fistula; Appendicitis; Children*

Introduction

Spontaneous fistulae constitute 15 - 25% of all enterocutaneous fistulaes [ECF] and have a trend to occur as complication of complicated appendicitis, typhoid enteritis, cancer, radiation, perforated ulcer disease and inflammatory bowel disease [1]. A recognized complication of appendicitis increase significantly when the appendix is perforated or gangrenous with periappendicitis [2]. A rare complication following appendectomy is associated with morbidity is the formation of enterocutaneous fistula [3-6]. Spontaneous enterocutaneous fistula following acute ruptured appendicitis is defined as the primary perforation of the appendix ruptured into retroperitoneal space and eventually draining via cutaneous sinuses with excluding fistula which is sequelae of appendicitis and surgically treated. We report a case of spontaneous enterocutaneous fistula complicating postileal perforated appendicitis in an 8-year-old boy.

Case Presentation

An 8-year-old boy was referred to the pediatric surgical unit for further management acute ruptured appendicitis. He had admitted with clinical condition of severe enterocolitis at a periphery hospital for 1 week before his referral. He developed generalized abdominal pain between the admission and there was a worse progression for clinical symptom so he was transferred to pediatric gastroenterologist at our hospital and clinical diagnosis including Computed tomography (CT) whole abdomen was revealed as acute ruptured appendicitis with periappendicitis, appendicolith and appendiceal phlegmon. The appendectomy was performed and cecum, terminal ileum, ileocecal valve, and ascending colon were reported to be inflammation and appendicolith retained in mid portion of appendix. Severe small bowel dilatation due to paralytic ileus was reported. Postoperative day 5 the patient developed discharge sinus at the site of an open appendectomy wound. Examination of his abdomen revealed a retracted appendectomy wound with surrounding erythema and a large amount feculent discharge was drained. His abdomen was soft and nondistended with tenderness to palpation in the right lower quadrant with non-associated guarding. Contrasted Computed tomography (CT) of his abdomen and pelvis was requested which showed tethering of the lateral wall of the terminal ileum to the adjacent abdominal wall with herniation of part of lateral wall of the terminal ileum through a defect in obliques muscles with fistulation from this hernia to the skin surface and extravasation of contrast medium at the terminal

ileal region. The initial treatment goal was to aim for a controlled fistula without evidence of sepsis or localized infection. We continued to treat him conservatively with parenteral nutrition, nasogastric tube decompression, intravenous antibiotics and regular dressings of the wound. CT whole abdomen with fistulogram in two weeks later showing the tract from terminal ileum with no contrast extravasation from intraluminal of terminal ileum and decreased amount of residual subcutaneous fluid collection. He responded well to the conservative treatment. Long gastrointestinal study and CT scan were performed in 6 weeks later with complete closure of the fistula.

Discussion and Conclusion

An enterocutaneous fistula is abnormal tract that communicate between the intestinal mucosa and the other epithelial surface of skin. In our case, terminal ileal intestinal contents are discharged externally. Infective or inflammatory bowel conditions (complicated appendicitis) were the main pathologies whose management ultimately resulted in ECF as in our case. Faecal fistula often results from these pathologies due to the presence of a negative nitrogen balance [7-10].

The overall goal of fistula management is to promote complete spontaneous closure. Quantification of fistula output allows more accuracy for management in the patient and provide prognostic information regarding mortality and surgical therapy. Our case, fistula is category into moderate-output (200 - 500 ml/day) initially and then low-output (< 200 ml/day) in following period. Our case, ileal fistula has a duration 60 days prior to complete spontaneous closure [11,12].

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Volume 12 Issue 4 April 2023