Extreme Small Bowel Enteroatmospheric Fistula

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Abstract

Small bowel enteroatmospheric fistula is a serious and devastating complication of open abdomen. We present an interesting image of a 40-year-old gentleman who developed multiple small bowel enteroatmospheric fistulae following open abdomen management for complicated intra-abdominal peritonitis.

Keywords Enteroatmospheric · Fistula · Open abdomen · Small bowel

A 40-year-old gentleman referred to our emergency department with two days history of pain abdomen, abdominal distension, and bilious discharge from laparotomy wound. He underwent ileocecal resection and anastomosis one week back for ileal perforation peritonitis. Emergency exploration, peritoneal lavage, end ileostomy, and distal stump closure were done. Three days later, he again had bile leak from main wound, which on re-exploration revealed jejunal perforation, probably from an overlooked serosal tear in a hostile abdomen, which was closed primarily. Bogota bag closure of the abdomen was done. Postoperatively, multiple pin-head opening from serosal injury was visualized just below the bogota bag leaking bile in main wound. The open abdomen was managed with negative pressure wound therapy technique with an effluent collecting totally in a collecting bag. Patient was kept on nil per oral with a total parenteral nutrition support. Subsequently, at three months of first surgery, patient developed multiple, matured small bowel enteroatmospheric fistula (Fig. 1). After control of sepsis and nutritional stabilization, patient underwent definitive surgery, with resection of fistula bearing ileal segment and jejunocolic anastomosis. Unfortunately, patient developed severe abdominal sepsis with ARDS postoperatively and succumbed on sixth postoperative day.

An enteroatmospheric fistula (EAF) is a major surgical complication after open abdomen management in patients with complicated peritonitis with a high mortality rate of 40% [1]. Spontaneous closure is extremely rare, and there is no single approach that has been proven ideal in every circumstance. Hence the management is technically difficult and challenging, especially with multiple, matured fistulas with mucosal protrusion [2].

The best method of management is prevention, by early closure of abdominal wall with negative pressure wound therapy

Fig. 1 Multiple, matured small bowel enteroatmospheric fistulae

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(NPWT) and mesh mediated fascial traction, which is safe and effective method characterized by low number of EAF [3].

Compliance with Ethical Standards

Conflict of Interest We declare that this manuscript represents valid work and that neither this manuscript nor one with substantially similar content under the present authorship has been published or is being considered for publication elsewhere and the authorship of this article will not be contested by anyone whose name(s) is/are not listed here, and that the order of authorship as placed in the manuscript is final and accepted by the co-authors.

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