Enterocutaneous Fistula Secondary to an Error in Placement of a Negative-Pressure Abdominal Dressing

Fístula enterocutánea secundaria a error en la colocación del sistema de presión negativa abdominal

Dear Editor:

We have read with interest the article published in your journal by Pérez et al.\(^1\) about the use of open abdominal negative pressure systems as an alternative for the prevention of abdominal compartment syndrome (ACS). Recently, we had the opportunity to treat a complication secondary to the misuse of the system, and we would therefore like to comment on the basic steps of its placement, as well as the treatment of enterocutaneous fistulas related with incorrect placement.

Our patient is a 57-year-old male who had undergone urgent surgery for ruptured abdominal aortic aneurysm. An aortoaoartic bypass was performed, and the patient presented postoperative ACS. The abdomen was left open with a negative pressure system, although the sponge was incorrectly placed in direct contact with the intestinal loops. During the revision surgery for the system dressing change, it was observed that the foam had adhered to the intestinal loops; it was not removed, and the negative pressure therapy was suspended. Daily wound treatment achieved epithelialization of the area around the foam (Fig. 1). Six months later, the patient was discharged with follow-up, and subsequent adequate healing of the wound was observed with integration of the foam in the tissue.

Six months later, the patient presented purulent secretion through the foam, and a CT scan confirmed the diagnosis of enterocutaneous fistula. Initial treatment was conservative. Subsequent elective surgery involved resection of the neotissue/foam plate, which was able to be separated from the

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loops. We resected the loop with the fistula and reconstructed the abdominal wall with intraperitoneal polypropylene-titanium mesh. The patient’s post-operative progress was good and he has presented no complications in one year of follow-up.

What is interesting about the case is that it is an iatrogenic complication not described previously in the literature secondary to open abdomen treated with a negative pressure system. According to the clinical guidelines for VAC® therapy, the dressing should never be placed directly on the exposed intestine; a non-adherent dressing film should always be used (preferably a microperforated one) to protect the underlying intestine. The dressing/foam should be placed on top of this non-adherent dressing film, followed by the sealing film. An orifice is created in the transparent sealing film to connect the suction, which can be either continuous or intermittent. Dressing changes should be done every 48–72 h, and no less than 3 times per week.²

The treatment of enterocutaneous fistulas is controversial. Nonetheless, most authors propose conservative treatment during the first months/year³ to exteriorize the fistula in order to avoid drainage of the content into the peritoneum. The use of vacuum systems is optional. Some authors propose⁴ closing the fistulas with biological dressings. In the case we present, we believe that the approach should have been conservative in spite of there being a foreign body embedded in the new tissue and in the elective surgery it was only necessary to resect the segment of the fistula.

Conflict of Interests

The authors have no conflict of interests to declare.

REFERENCES


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