

Treating Enterocutaneous Fistulas With a Hydroconductive Dressing

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An enterocutaneous fistula (ECF) is an abnormal communication between the small or large bowel and the skin. ECFs most frequently occur postoperatively; the ileum is the most common source of origin.¹ ECFs have posed vexing problems for clinicians since first described by Celsus in 53 BC.² They are classified based on the amount of output of enteric contents as low output (<200 cc/day), moderate output (200–500 cc/day), and high output (>500 cc/day).³

The standard treatment for an ECF is conservative because most fistulas will close spontaneously and operative attempts at fistula closure are fraught with complications.² The patient needs to receive supportive care because electrolyte imbalance is common, depending on the amount of the loss of enteric contents containing fluid and electrolytes.

While awaiting spontaneous closure, enteric contents cause multiple skin irritation problems, ranging from erythema to maceration to skin loss. Many dressings, pouches, powders, and ointments have been used to treat ECFs and surrounding skin with variable degrees of success. If complications can be prevented, the majority of ECFs will close spontaneously unless factors are present that prohibit closure. These factors have been enumerated as foreign body, radiation, inflammation, epithelialization, and distal obstruction, the acronym FRIEND.⁴

In our wound practice, a simplified method for treating ECFs and the many wound problems associated with them has been to use a hydroconductive wound dressing (Drawtex, SteadMed Medical, LLC, Fort Worth, TX). The Drawtex dressing is designed to draw off exudate, bacteria, and deleterious chemicals.⁵ It is used as a wick placed directly into the ECF cutaneous opening. The wick acts as a physical barrier to the high output. To address leakage, additional hydroconductive dressings are used to dress the surrounding skin. These additional layers draw the enteric contents off the surrounding skin. Depending on the amount of fistula output, the peristomal dressings can be stacked in multiple layers. A final border dressing is applied and the entire wick and dressing changed as needed.

Using the hydroconductive dressing as a wick into the fistula stoma and stacked dressings on the surrounding



Figure 1. Hydroconductive dressing used as a wick inserted into cutaneous opening of enterocutaneous fistula to minimize flow of enteric fluid and contain where the contents flow.

skin has totally eliminated the skin problems associated with ECFs in our patients. Maintaining the integrity of the surrounding skin allows contraction and epithelialization to occur and the fistula to decrease in size and output.

An example of this treatment of ECFs is an 85-year-old woman with a large ventral hernia and a high-output fistula that developed through an overlying skin graft. Her fistula had been present for several months before starting treatment with the hydroconductive dressing regimen. She recently had a failed attempt at closure. With that attempt, she was placed on total parenteral nutrition (TPN). After a line infection, her TPN was stopped, but she was dehydrated due to her high fistula output. Her quality of life was limited due to fear of leakage, pain from skin excoriation, and inability to tolerate a regular diet.

Figure 1 demonstrates the insertion of the hydroconductive dressing wick into the fistula stoma. Figure 2 shows the amount of enteric output that occasionally



Figure 2. The amount of enteric material can be excessive and completely saturate several layers of hydroconductive dressing.

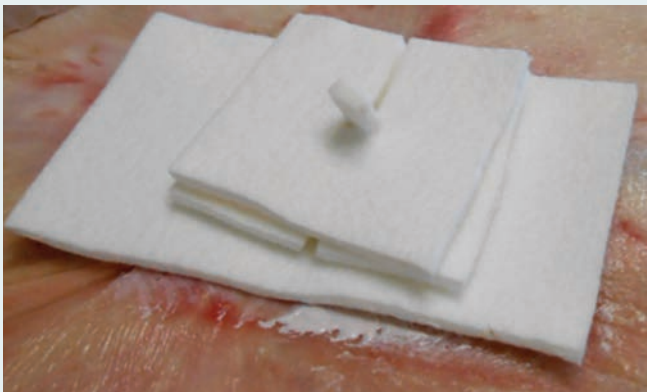


Figure 3. The amount of fistula fluid steadily decreased over time. Stacking the hydroconductive dressing allowed the patient to carry on activities of daily living and increase her ability to socialize.

soaks the hydroconductive dressings stacked around the stoma. Figure 3 demonstrates stacking of the dressing around the wick. The dressing technique allowed the peristomal skin excoriation to heal and the area of the stoma to contract. The treatment with the hydroconductive dressing technique allowed total control of the high-output ECF with a trajectory toward healing. The patient was able to change her living habits, tolerate a regular

diet, resume social activities, and dramatically decrease her dressing changes. Figure 4 demonstrates the skin opening with contraction of the skin edges and healing of the peristomal skin.

This novel technique using hydroconductive dressings to control fistula output and protect surrounding skin has proved useful for the treatment of ECFs. For this patient, it has given her an active lifestyle back. ■

References

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Figure 4. After 20 months, the patient was tolerating a regular diet and resuming social activities, and the skin edges surrounding the stoma show some contraction. The skin excoriation is minimal for a previously high-output fistula, and all pain from the skin irritation disappeared.