

THE TREATMENT OF ENTEROCUTANEOUS FISTULAS WITH A HYDROCONDUCTIVE DRESSING

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Introduction: 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. ECFs have posed vexing problems for clinicians since first described by Celsus in 53 BC. ECFs are classified based on the amount of output of enteric contents as low-output (<200 ccs/day), moderate-output (200-500 ccs/day), and high-output (>500 ccs/day). Operative attempts at fistula closure are fraught with complications. 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.

Methods: In this series a hydroconductive dressing* designed to draw off exudate, bacteria, and deleterious chemicals was used as a wick into the ECF cutaneous opening with additional hydroconductive dressings on the surrounding skin. Depending on the amount of fistula output, the peristomal dressings can be stacked to multiple layers. A final border dressing is applied and the entire wick and dressing changed qm.

Results: The use of the hydroconductive wicks into the fistula stoma and stacked dressings on the surrounding skin has eliminated the skin problems associated with ECFs. Maintaining the integrity of the surrounding skin allows contraction and epithelialization to occur and the fistula to decrease in size and output.

Example of Clinical Case: An 85-year-old woman with a large ventral hernia presented with a high-output ECF that developed through an overlying skin graft. Her fistula had been present for several months prior to starting treatment with the Hydroconductive dressing regimen. She had recently had a failed attempt at closure. With that attempt, she was placed on TPN. After a line infection, her TPN was stopped, but she was dehydrated due to her high enteric content output. Her life style was limited due to fear of leakage, pain from skin excoriation and inability to tolerate a regular diet. After instituting the Hydroconductive wick and dressings, total control of the ECF output was established. The peristomal skin excoriation healed and the area of the stoma began to contract. The patient was able to change her living habits, tolerate a regular diet, resume social activities, and dramatically decrease her dressing changes.

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

*Drawtex Hydroconductive Wound Dressing (SteadMed Medical LLC, Ft Worth, TX)

References:

- 1) Kumar P, Maraju NK, Kate V: Enterocutaneous fistulae: etiology, treatment, and outcome – A study from South India. Saudi J Gastroenterol 2011; 17(6): 391-395.
- 2) Berry SM, Fischer JE: Classification and pathophysiology of enterocutaneous fistulas. Surg Clin N Amer 1996; 76(5): 1009-1018.



(Figure 1)

Hydroconductive dressing used as a wick into cutaneous opening of ECF to control flow of enteric fluid and contain where the contents flow.



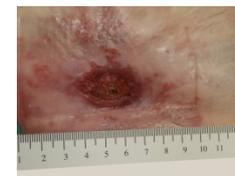
(Figure 2)

The amount of enteric material can be excessive and saturate several layers of Hydroconductive dressing.



(Figure 3)

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



(Figure 4)

Following use of the protocol, the skin edges surrounding the stoma show some contraction. The skin excoriation is minimal and all pain from the skin irritation disappeared.