

Skin Grafting for the Treatment of Enterocutaneous Fistulas

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Background

- Enterocutaneous fistulas principally result from complications after abdominal surgery
- The mortality rate ranges from 5-37%
- The majority of enterocutaneous fistulas are treated by pouching
 - Additional treatments include biologic fibrin glue injections, somatostatin analogs (octreotide), and negative pressure wound therapy

Objectives

We review our experience with the use of acellular dermal matrices and skin grafting in the treatment of enterocutaneous fistulas.

Methods

We conducted a retrospective chart review of 3 patients who received acellular dermal matrices and skin grafting in the treatment of enterocutaneous fistulas

Patient Population

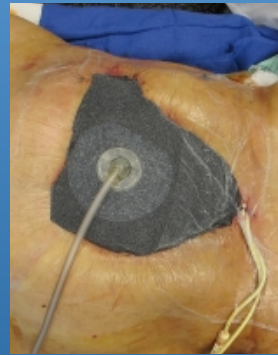
- 3 patients total:
 - 3 Females.
 - Ages 43, 54, and 36

Case Example

- Patient 2 suffered multiple complications from a laproscopic cholecystectomy, including a subsequent exploratory laprotomy, a bile duct injury, infection, hepatic abscess, and abdominal wound formation.
- The patient presented with an open 20 x 25cm abdominal wound with granulation tissue and a low output enterocutaneous fistula superior to the wound.

Case Example Continued

- A split-thickness graft was harvested from the patient's right thigh and placed over the wound; the graft was secured with Evicel® and Dermabond®
- A wound VAC was then applied to the area



Results

- The patients tolerated the procedure well, without any complication.
- Post-operatively, there was 95% graft take and full wound closure.

Discussion

- Despite the numerous advancements in surgical techniques over recent years, the occurrence of fistulas has remained fairly constant
- Postoperative enterocutaneous fistulas occur as a complication in 0.8-2% of abdominal surgeries
- Several techniques now exist to enable fascial closure of the open abdomen

Discussion

- VAC use has reduced but not eliminated the need for split-thickness skin grafts or mesh
- The use of a dermal matrix and fibrin glue prevents contamination from the enteric fluid
- Additionally this method prevents the bowel from desiccation and touching surrounding dressings
- Fibrin sealants, in combination with a dermal matrix, may allow for a chance of spontaneous closure

Conclusion

- In spite of numerous technological advancements, fistula treatment options are fairly limited remains
- Our results support the use of skin grafting and fibrin glue as a successful method of treating enterocutaneous fistulas
- Our findings are consistent with a previous report, which indicates that the acellular dermal matrix is able to be incorporated into the wound and the fibrin glue secures it and closes the fistula

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