

Treatment of Pyoderma Gangrenosum with a Synthetic Hybrid-Scale Fiber Matrix*

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Introduction

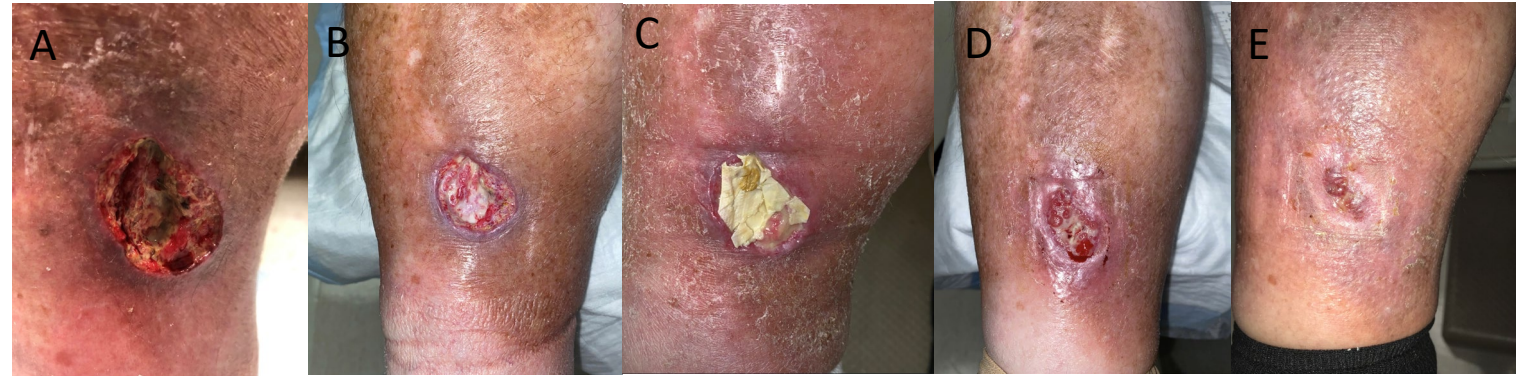
Pyoderma gangrenosum is a rare and painful condition that results in ulceration of the skin, typically on the legs.¹ There are currently no standard guidelines for the treatment of these wounds, and they are often difficult to manage.² New treatment options are needed to improve healing. A synthetic hybrid-scale fiber matrix* is gaining popularity in the treatment of chronic and complex wounds. The current case study evaluates the use of the synthetic hybrid-scale fiber matrix in the treatment of a patient with pyoderma gangrenosum that had previously failed other advanced therapies.

Methods:

A 67-year-old male with a diagnosis of pyoderma gangrenosum underwent treatment with the synthetic hybrid-scale fiber matrix. Wound healing progress was monitored, and the synthetic hybrid-scale fiber matrix was reapplied as clinically indicated.

Results:

The initial wound size prior to treatment with the synthetic hybrid-scale fiber matrix was 3 x 2.6 x 6 cm. The matrix was applied 5 times between 1/31/22 and 5/9/22, and the patient achieved complete wound closure in 14 weeks. This patient had previously failed multiple advanced wound therapies including allogenic matrices, clobetasol, silver sulfadiazine, and polyvinyl alcohol foam dressings. The patient had multiple comorbidities including anemia, chronic kidney disease, dermatitis, hyperlipidemia, psoriasis, rheumatoid arthritis, and a history of methicillin-resistant *Staphylococcus aureus*.



A: Initial presentation of the pyoderma gangrenosum wound

B: The debrided pyoderma gangrenosum wound prior to the initial application of the synthetic hybrid-scale fiber matrix

C: The second application of the synthetic hybrid-scale resorbing into the wound bed

D: Regranulation and re-epithelialization of the wound bed, 6 weeks after initial application of the synthetic hybrid-scale fiber matrix. The 4th application of the synthetic hybrid scale fiber matrix was applied at this visit.

E: Wound healing achieved 14 weeks after initial application of synthetic hybrid scale fiber matrix

Discussion and Conclusion

Treatment with the synthetic hybrid-scale fiber matrix in this case of pyoderma gangrenosum resulted in complete wound closure, despite multiple patient comorbidities and previous failures with other therapies. While this is only a single case, the positive clinical outcomes suggest that the synthetic hybrid-scale fiber matrix may be a viable treatment option for chronic and complex wounds such as pyoderma gangrenosum.

Trademarked Items: *Restrata®, Acera Surgical, Inc., St. Louis, Missouri

References: 1. Brooklyn T, Dunnill G, Probert C. Diagnosis and treatment of pyoderma gangrenosum. *BMJ*. 2006;333(7560): 181-184. Doi:10.1136/bmj.333.7560.181 2. Gameiro A, Pereira N, Cardoso JC, Gonçalo M. Pyoderma gangrenosum: challenges and solutions. *Clin Cosmet Investig Dermatol*. 2015;8:285-293. Published 2015 May 28. doi:10.2147/CCID.S61202