

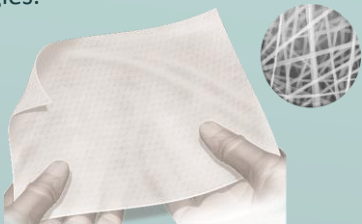
Treatment of Chronic and Complex Wounds with a Synthetic Hybrid-Scale Fiber Matrix*

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Introduction

Non-healing wounds develop as a result of varying etiologies including disease, surgery, and trauma. These wounds are often difficult to manage, and many times require advanced treatment options. A synthetic hybrid-scale fiber matrix is becoming increasingly popular as an option due to its versatility and effectiveness in treating various wounds. The current study investigates the efficacy of the synthetic hybrid-scale fiber matrix in the treatment of non-healing wounds of varying etiologies.



Synthetic hybrid scale fiber matrix

Results

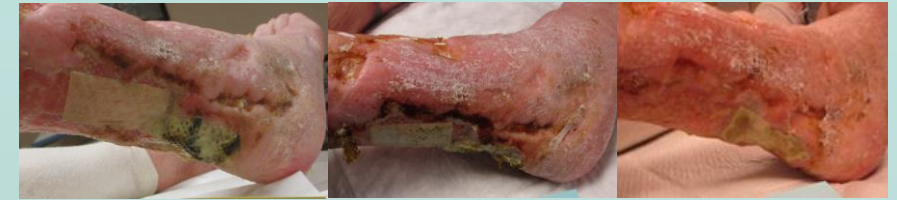
The average patient age was 68 years old. Patients had multiple co-morbidities including venous insufficiency, hypertension, hyperlipidemia, breast carcinoma, and chronic kidney disease. Various wounds were treated in this study, including venous leg ulcers, hematoma, and atypical post-surgical wounds. Four out of 7 wounds closed 7 weeks after initial treatment with the synthetic hybrid-scale fiber matrix. The 3 patients that did not achieve total wound closure developed 80 – 90% regranulation of the wound bed, resolved undermining and tunneling, as well as significant decrease in wound area of up to 65%. The average number of synthetic matrix applications was 5.6.



Progressive healing of a post surgical trauma wound after 5 applications of the synthetic hybrid-scale fiber matrix. Time to closure was 98 days



Progressive healing of a venous leg ulcer after one application of the synthetic hybrid-scale fiber matrix. Time to closure was 28 days.



Progressive healing of an atypical ulcer with exposed tendon after 10 applications of the synthetic hybrid-scale fiber matrix. 63% decrease in wound size and regranulation over exposed tendon 86 days post initial application



Progressive healing of a spontaneous hematoma after 5 applications of the synthetic hybrid-scale fiber matrix. Time to closure was 81 days.

Methods

A retrospective analysis of 7 patients with a total of 7 wounds was conducted. Patients were treated with the synthetic hybrid-scale fiber matrix and wound healing progress was observed. The synthetic hybrid-scale fiber matrix was reapplied as deemed appropriate.

Discussion and Conclusion

Use of the synthetic hybrid-scale fiber matrix demonstrated wound healing efficacy across various wound types and in the presence of multiple patient co-morbidities. Overall, this case series suggest that the synthetic hybrid-scale fiber matrix can be utilized to reach the appropriate clinical outcomes, whether that be total wound closure or wound bed regranulation

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