

Use of a Decellularized Dermal Matrix* to Heal Pilonidal Sinus Wounds When Standard of Care Fails



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Introduction

Pilonidal sinus wounds (PSW) form as follicles in the gluteal cleft become blocked due to friction and moisture, leading to inflammation, infection and abscess formation. The acute abscess can evolve into a chronic abscess, leading to the development of sinus tracts that connect the abscess cavity to the skin surface. In many cases, the wound may fail to heal completely, leading to recurrent infections, drainage and discomfort. Treatment often involves surgical excision of the sinus tracts and ongoing wound care to prevent recurrence. The non-healing PSW, and prolonged need for wound care, greatly impact patients' quality of life.

We present two cases of recurrent pilonidal cyst sinus wounds that had failed to heal despite multiple surgical and standard wound care interventions. In both cases, a decellularized dermal matrix (DDM)*² created from donated human skin (see Fig. 1) was applied to the wound site and successfully closed the wounds.

Case History

Patient #1 is a 37 year old female who had a pilonidal cyst surgically removed 1 year previously and then a second attempt 3 months after failed closure from the first surgery. On the day of treatment, the wound measured 1.0 x 0.5 x 1.0 cm (LWD).

Patient #2 is a 33 year old female with a large, deep wound from surgical debridement measuring 4.5 x 3.5 x 6.5 cm (LWD). The wound had been open for 6 months prior to a second debridement.

Both Patients received standard of care wound treatment since each surgery but did not close.

Actions Taken

Both patients received DDM* grafts after debridement and creation of a lightly bleeding base in each wound. Wounds were packed to hold the DDM* in place during healing and control exudate.

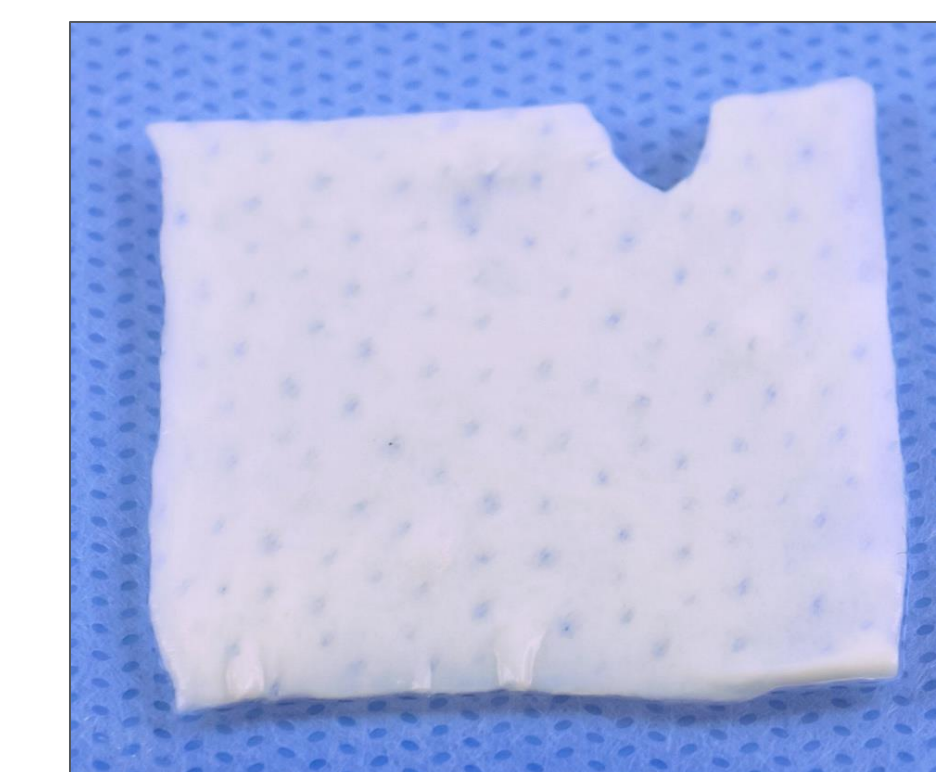


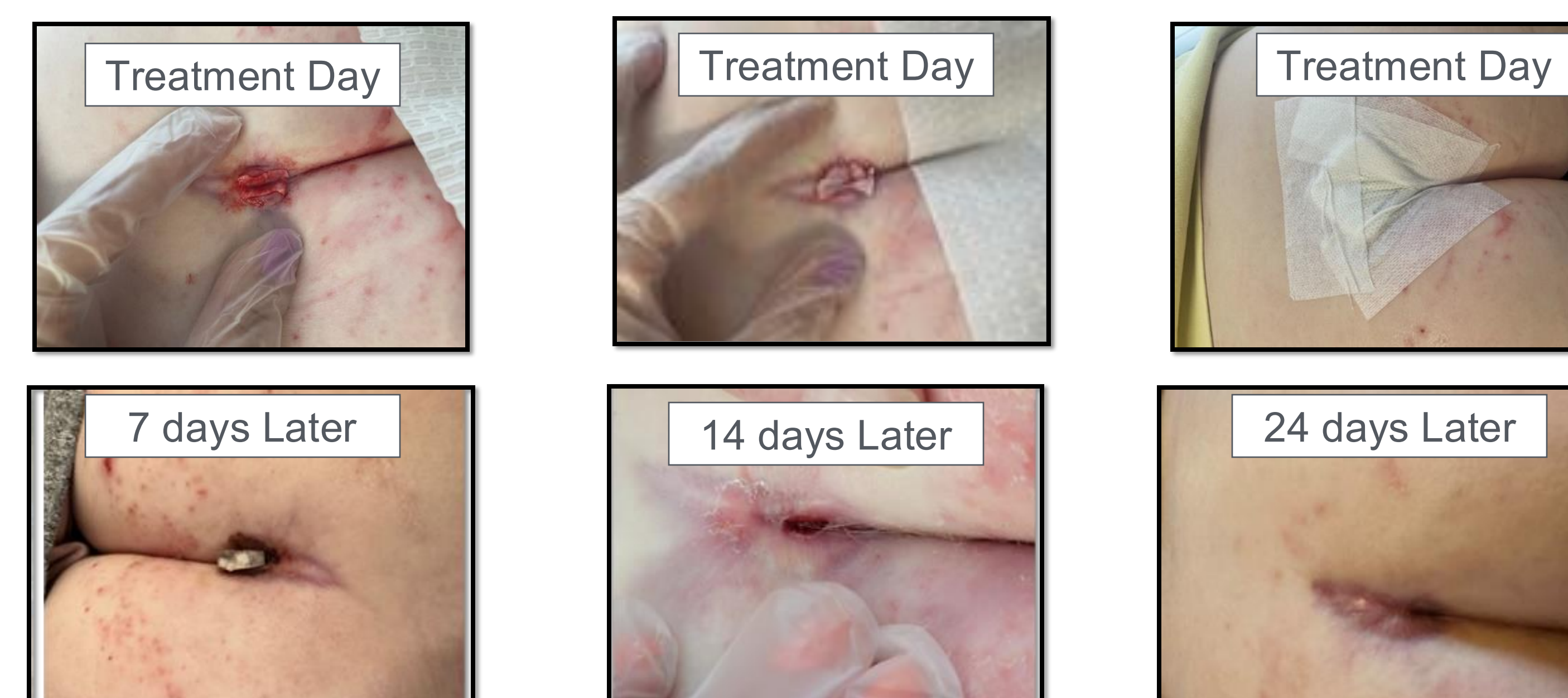
Figure 1. Decellularized Dermal Matrix (DDM)*

All patients had a secondary dressing applied on top of the DDM* in the wound which was changed weekly. Offloading of the wound area was prescribed and followed by both patients.

Results

Patient #1 (see Fig. 2) had mild drainage initially but at 2 weeks post treatment moderate drainage was present causing the DDM* to become detached. Despite this, the wound closed 24 days post-treatment.

Figure 2. Healing Progression for Patient #1



Patient #2 (see Fig. 3) had mild to moderate drainage that was managed with significant new tissue growth progressively filling the wound until it closed 45 days post-treatment.

Figure 3. Healing Progression for Patient #2



Implications for Practice

The new tissue regenerative DDM* provided the needed environment and stimulation for cells to mount effective healing of pilonidal cyst wounds. This approach may also help to provide a more effective treatment for other difficult to heal wounds.

References

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- (2) Costa, I.G. et al. A Feasibility and Safety Study of a Novel Human Decellularized Dermal Matrix to Accelerate Healing of Neuropathic Diabetic Foot Ulcers in People With Type 1 and Type 2 Diabetes Can J Diabetes (2022) 46: 671-677. DOI: 10.1016/j.jcjd.2022.03.010

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