



Treatment of a Severe Lactational Abscess with Multi-Tissue Platform (MTP) Porcine Xenograft

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Introduction

Lactational breast abscess is typically due to a bacterial infection entering through cracks in the nipple. Management of lactational abscess can range from percutaneous aspiration of the abscess or in serious cases, surgical debridement.¹ This case highlights the use of multi-tissue platform (MTP) porcine xenograft to manage a severe lactational abscess with overlying skin necrosis. Although the lactational abscess was in a challenging location, the patient was able to continue breastfeeding and received surgical management in an outpatient setting, without the need for formal surgical debridement.

Case Report

Patient Presentation:

- 24 y.o. G1P1 female was 3 months post partum with no PMH or PSH with breast swelling, tenderness, and redness with fevers.
- Subsequent to a course of antibiotics she presented to the ER with leukocytosis.
- US revealed a 5 cm x 4cm abscess located at 9:00 CMFN
- 53ml of purulent fluid was drained on needle guided aspiration.

At Initial Follow up 5 days later:

- 5.5 cm x 5.5 cm full-thickness area of dermal necrosis in the region of the previous abscess.
- Betadine facilitated the demarcation and sloughing of the lesion
- The exposed breast tissue resulted in significant pain.

Wound management:

- Wound dimensions 5.5 cm x 5.5 cm x 3cm depth with breast milk in the wound.
- MTP porcine xenograft was liberally applied.
- Pain resolved from 10/10 to 0/10 within 48 hours.
- MTP porcine xenograft applied again 5 day after initial application.
- Wound dressings were changed in clinic every 5-10 days.
- At 12 days, the wound depth was 0 cm.
- Within 6 weeks following initial MTP application, the wound was completely healed.

Images



Eschar prior to betadine application.



Wound following sloughing of the eschar



First MTP application date. Measured 5.5 cm x 5.5 x 3 cm depth.



Wound 5 days following MTP application. Measured 2.5 cm length x 3.5 cm wide x 0.0 cm deep.



3 weeks after second MTP application.



2 months after initial MTP placement.

Discussion

Breast abscesses are treated with percutaneous aspiration but in cases of progression or recurrence, surgical debridement is recommended. In such cases where debridement is necessary, potential complications include fistula formation, milk suppression, or severe post-op scarring. MTP porcine xenograft facilitates constructive remodeling, accelerates wound healing, and can be used in contaminated wounds because of demonstrated antimicrobial activity.

In this case, the use of the MTP porcine xenograft facilitated:

- Patient's continued ability to breast feed
- Better cosmetic outcome than surgical debridement
- Decreased pain
- Return to normal activities such as work more quickly
- Mitigation of complications associated with debridement (fistula, chronic infection)

MTP Xenograft Characteristics:

- Multi-Tissue Platform (MTP) is a proprietary blend of multiple extracellular matrix materials that is derived from porcine spleen and lung. The basement membrane provides scaffolding. Due to the unique processing of internal organs, there remains bioactive collagens and cell signaling proteins which interact with the host to facilitate constructive remodeling. Biomolecules include the following: Collagen type I, III, IV, V; laminin, elastin, fibronectin, fibroblast growth factor, vascular endothelial growth factor, epidermal growth factor, hyaluronic acid and exosomes.²

Conclusions

The use of MTP porcine xenograft is an excellent option for addressing severe lactational abscesses as it accelerates wound healing in a contaminated environment. In this case also allowing the mother to continue breast feeding.

References

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2. Stemsy. Technology. <https://www.stemsysbio.com/mtp-technology>. Accessed February 15, 2024.