DUAL LAYER AMNIOTIC ALLOGRAFT FACIAL BURNS

CASE STUDIES

Deep second-degree burns (also known as deep partial thickness burns) to the face and ears are challenging to treat due to the various contours of the face and ears. Cosmetic outcomes are also an important consideration when selecting treatment options. The traditional use of burn wound excision followed by allograft placement (cadaveric dermis) and transitioning to autografts may be an effective option; however, this process may have unfavorable aesthetic results on the face.

The practice mentioned in this case study uses VIVEX® Biologics dual layer amniotic allograft to treat deep second-degree facial burns. The dual layer amniotic allograft has 2 layers of amnion. The innate nutrient-rich endogenous growth factors present in the tissue are preserved using VIVEX's Integrity Processing method. This allograft provides a barrier and provides mechanical protection to the damaged tissue.[1,2,3] This practice has seen favorable outcomes with a single allograft application.

The following 2 cases are examples of the practice's experiences with the VIVEX Biologics dual layer amniotic allograft.

CASE 1

CLINICAL HISTORY

A 46-year-old male was admitted with 14% total body surface area second-degree superficial partial thickness flash electrical burn to his face, ear, neck, chest and forearm. The focus of this case study will be on the treatment of his face and right ear.

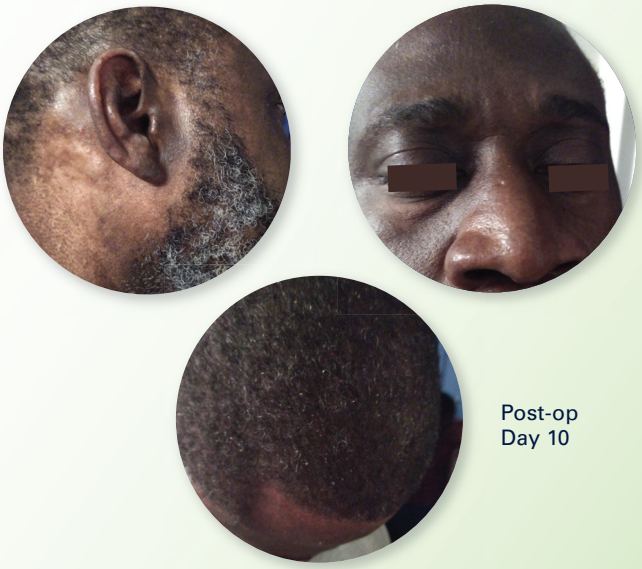
Post-op Day 7

APPLICATION OF VIVEX BIOLOGICS DUAL LAYER AMNIOTIC ALLOGRAFT

Due to the second-degree superficial partial thickness burn to the face and right ear, a dual layer amniotic allograft was applied once to his face as an anatomical barrier, providing mechanical protection. Bacitracin was applied over the amnion tissue to maintain moisture. No external dressing was required.

FINAL OUTCOME

At post-op day 7, the face treated with the dual layer amniotic allograft was healed. The scalp treated with cadaver skin was still raw and required additional intervention. On post-op day 10, the entire face and ear had healed after a single amniotic allograft application.



Post-op Day 10

CASE 2

CLINICAL HISTORY

A 64-year-old male was admitted with 22% total body surface area burns to his face, head and bilateral upper extremities. He had deep partial thickness burns on his head and deep second-degree burns on his face. The focus of this case study will be on the treatment of his face and head.

Immediately postoperative after burn excision and application of skin allograft and prior to application of VIVEX Biologics MIAMNION Dual Amnion tissue allograft

APPLICATION OF VIVEX BIOLOGICS DUAL LAYER AMNIOTIC ALLOGRAFT

Due to the deep second-degree burns to the patient's face, a dual layer amniotic allograft was applied once to his face as an anatomical barrier, providing mechanical protection. Bacitracin was applied over the amnion tissue to maintain moisture. No external dressing was required.

FINAL OUTCOME

This patient was seen in the clinic 12 weeks after the single application of amniotic allograft. His facial burn was 100% healed and there were no visible scars on his face.

Post-op
12 weeks

CONCLUSION

The practice successfully used the VIVEX Biologics dual layer amniotic allograft to treat deep second-degree burns to the face and ears that are challenging to treat due to the various contours of the face and ears. The traditional use of debridement followed by cadaver skin and transitioning to autografts is an effective option; however, this may lead to unfavorable aesthetic results if an entire subunit of the face is not treated with an identical graft. The practice has seen minimal scarring in treating faces and ears with one application of the dual layer amniotic allograft. The dual layer amniotic allograft is readily available and conforms with relative ease to the contours of the face and ears.

DUAL LAYER AMNION ALLOGRAFT

Derived from the amnion layer of the placental membrane

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Approximately 2X thicker than traditional single layer amnion

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The double-sided membrane features 2 layers of amniotic tissue, oriented with the epithelial layer facing outward, allowing for **omnidirectional** implantation of the allograft

1. Rowlatt, Ursula. "Intrauterine Wound Healing in a 20 Week Human Fetus." Virchows Arch. A Path. Anat. and Histol, 1979, vol. 381, pp. 353-361.
2. Coolen, Neeltje A., et. al. "Comparison Between Human Fetal and Adult Skin." Archives of Dermatological Research, 2010, vol. 302, pp. 47-55.
3. Niknejad, Hassan, et. al. "Properties of the Amniotic Membrane for Potential Use in Tissue Engineering." European Cells and Materials, 2008, vol. 15, pp. 88-89.

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