

Dehydrated Human Umbilical Cord Allograft for the Treatment of a Post-Surgical Amputation Wound of the Right Forefoot

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Abstract

Background: Surgical wounds following an amputation often present a difficult treatment challenge for patients and health care providers. Dehydrated human umbilical cord allograft is a minimally manipulated, dehydrated, non-viable cellular umbilical cord allograft for homologous use that provides a protective environment for the healing process and provides a connective tissue matrix to replace or supplement damaged or inadequate integumental tissue. The allograft consists of an amniotic epithelium and Wharton's Jelly containing extracellular matrix composed of collagen, proteoglycans and hyaluronic acid. Our purpose is to describe the use of dehydrated human umbilical cord allograft in the treatment of a diabetic patient with a post-surgical wound following amputation of the right forefoot.

Case: 60 y/o male with a history of insulin dependent type 2 diabetes, high blood pressure, atherosclerosis and blood clots in legs. The patient's blood sugars were uncontrolled averaging 200-250 mg/dl. The patient was first seen in the hospital with gangrene of the right forefoot and a lower extremity amputation was performed. Initial wound size was 8.0 cm x 2.5 cm x 0.1 cm. The patient was seen weekly for debridement and application of dehydrated human umbilical cord allograft followed by standard topical dressings.

Results: Within 1 week, the wound reduced in size by 25% and within 2 weeks by 51%. The wound completely healed in 4 weeks with 4 applications of dehydrated human umbilical cord allograft. The wound remained healed at 2 months.

Conclusion: Our experience with this case illustrates that dehydrated human umbilical cord allograft is a viable advanced treatment option for helping to heal a post-surgical wound following amputation. The allograft was easy to use, clinically effective and well tolerated by the patient.

Background

- Surgical wounds following an amputation often present a difficult treatment challenge for patients and health care providers.
- Patients with diabetes are at increased risk for wound healing complications especially in patients with uncontrolled blood sugars.
- Promoting rapid and complete wound healing with advanced wound care therapies reduces the risk for additional infection and amputation.

Dehydrated Human Umbilical Cord Allograft

- Dehydrated human umbilical cord allograft is a minimally manipulated, dehydrated, non-viable cellular umbilical cord allograft for homologous use that provides a protective environment for the healing process and provides a connective tissue matrix to replace or supplement damaged or inadequate integumental tissue.
- The allograft consists of an amniotic epithelium and Wharton's Jelly containing extracellular matrix composed of collagen, proteoglycans and hyaluronic acid.
- Dehydrated human umbilical cord allograft is processed using the PURION® PLUS Process, a unique approach that provides an easy to use allograft stored at ambient conditions.

Purpose

- Our purpose is to describe the use of dehydrated human umbilical cord allograft in the treatment of a diabetic patient with a post-surgical wound following amputation of the right forefoot.

Case

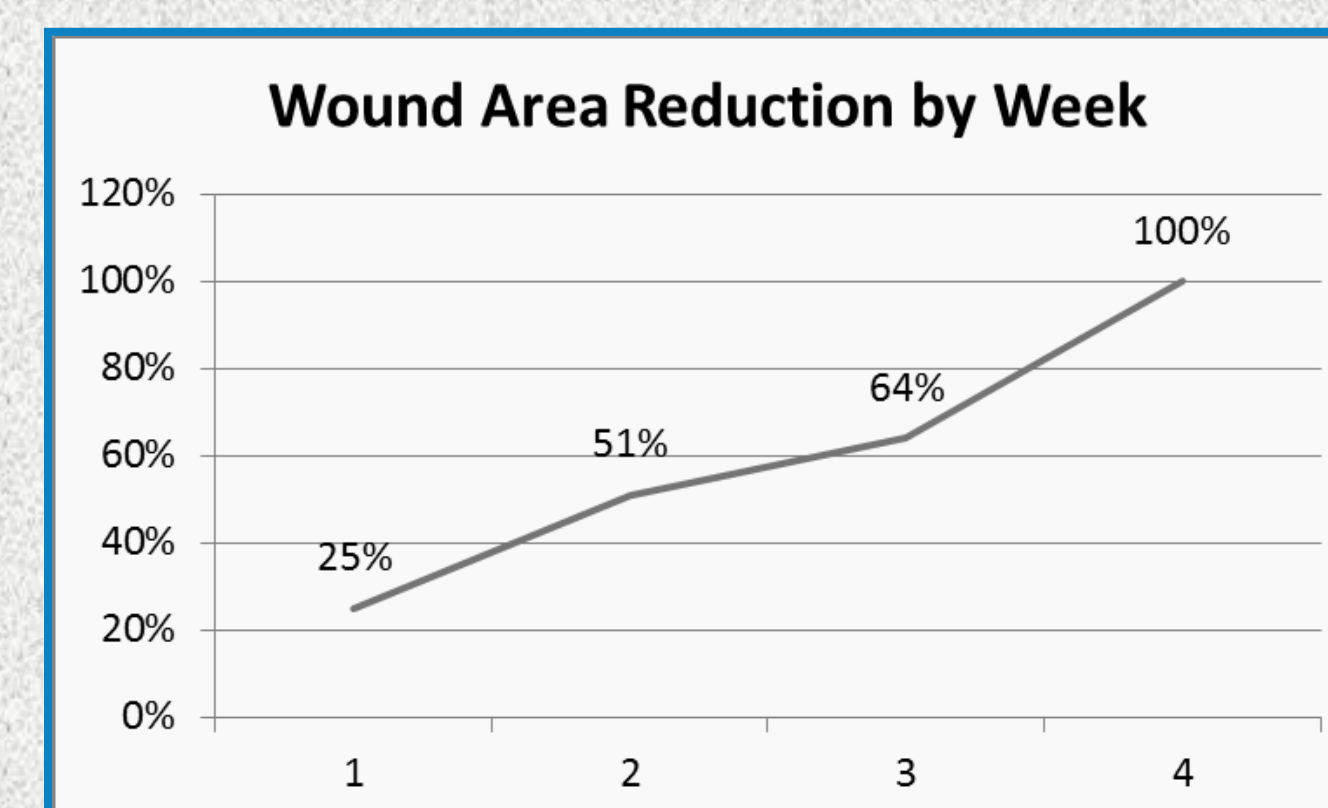
Case History

- 60 y/o male with a history of insulin dependent Type 2 diabetes, high blood pressure, atherosclerosis and blood clots in legs. He also had peripheral vascular disease with previous stents and angioplasty of the lower extremity.
- The patient's blood sugars were uncontrolled averaging 200-250 mg/dL.
- The patient smoked 2 packs per day for over 30 years.
- The patient was first seen in the hospital with gangrene of the right forefoot and a lower extremity amputation was performed.

Treatment with Dehydrated Human Umbilical Cord Allograft

- Initial wound size at first application was 8.0cm x 2.5cm x 0.1cm.
- The patient was seen weekly for debridement and application of dehydrated human umbilical cord allograft followed by standard topical dressings until complete epithelialization occurred.

Results



The wound completely healed in 4 weeks with 4 applications of dehydrated human umbilical cord allograft and remained healed at 2 months.

Conclusions

- Our experience with this case illustrates that dehydrated human umbilical cord allograft is a viable advanced treatment option for helping to heal a post-surgical wound following amputation.
- The allograft was easy to use, clinically effective and well tolerated by the patient.

Case Photos: Post-Surgical Amputation Wound of the Right Forefoot



Initial Presentation and Application of Dehydrated Human Umbilical Cord Allograft



Week 1

Week 2



Week 3

Healed in 4 weeks