

Avoiding Amputation in a Complex Diabetic Foot Infection Using a Multidisciplinary Approach

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OBJECTIVE

The aim of this case study is to demonstrate that a multidisciplinary approach is highly effective for optimal healing outcomes and limb salvage.

METHOD

A retrospective review of a patient's diabetic foot ulcer treatment was performed.

HISTORY OF PRESENT ILLNESS

- 65 year old woman
- Type II diabetic with neuropathy
- Previously fused 1st metatarsalphalangeal joint for hallux rigidus
- Developed non-healing wound on the plantar first metatarsal head
- Underwent conservative treatment which continued for years at outside facility including:
 - Regular wound care
 - Debridements
 - Offloading with a removable shoe

After severe foot infection developed complicated by sepsis, she underwent emergent incision and drainage of the abscess with hardware removal. Post-operatively, there was exposed bone on the dorsal, medial and plantar surfaces at the area of the previous fusion site.

POST-SURGICAL MANAGEMENT

- Multidisciplinary approach
- Serial total contact casting for offloading the wound
- Knee stroller when not in total contact cast
- Hyperbaric oxygen therapy
- Vascular evaluation
- Intravenous antibiotics managed by infectious disease specialists
- Nutrition intervention with supplemental protein/ arginine
- Optimization of glycemic control
- Serial wound debridements and use of advanced wound care products
- Split thickness skin grafting to the non-weight-bearing surface of the wound



TCC



Vascular Assessment



HBOT

OUTCOME

The patient completely healed within one year. She went on vacation and returned with no issues.

- Ambulatory without assistance
- Wears diabetic shoes with insoles
- Complete return to ADL's
- Extremely pleased that she avoided amputation!

CONCLUSION

This case demonstrates that a multidisciplinary approach addressing all medical and surgical considerations in a patient can avoid amputation even in a patient with a morbidly complicated diabetic foot ulcer.

DFU Healing Time

Weeks in Treatment	Length (cm)	Width (cm)	Depth (cm)
2	4.0	5.2	0.6
8	3.1	4.8	0.1
16	1.0	2.2	0.1
24	2.0	1.7	0.1
32	0.8	0.4	0.1
40	1.5	1.6	0.7
48	0.3	0.3	0.2
52	none	none	none



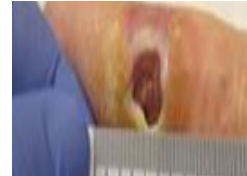
Initial Presentation
Post-op Week 2



Week 12



Week 26



Week 39



Week 50



Week 52
Healed