

# Advancing Health

**A CASE STUDY** from MedStar Washington Hospital Center

## *Reconstructive Surgery as Alternative to Amputation*

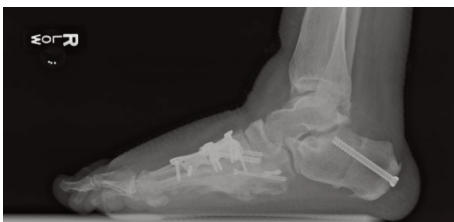
### **Surgical Intervention for Diabetes-Related Charcot Arthropathy**

Caitlin S. Zarick, DPM

Reconstructive Foot and Ankle Surgeon at MedStar Washington Hospital Center

#### **Abstract**

A 35-year-old obese male previously diagnosed with diabetes and Charcot arthropathy had an open foot wound that was not healing due to the severe deformity of his foot. After being successfully treated with a total contact cast to heal the wound and lowering his hemoglobin A1c, he underwent surgical correction and fusions of his midfoot and rearfoot. Correcting the underlying foot structure created a plantigrade foot that will have a decreased chance of re-ulceration and amputation.



Post-op Lateral X-ray of the Right Foot



Post-op AP X-ray of the Right Foot

# CASE STUDY

## *Reconstructive Surgery as Alternative to Amputation* Surgical Intervention for Diabetes-Related Charcot Arthropathy

---

### Patient Presentation

- A 35-year-old male presented with a chronic open wound to the right foot. The foot was C-shaped, placing increased pressure on the plantar lateral forefoot.
- Patient had a history of poorly controlled diabetes and obesity with previous metatarsal fractures to the right foot. He had absent sensation to the feet and an ulceration that was not responding to other conservative therapy.
- Patient was sent for a second opinion and evaluation of severe Charcot deformity to the midfoot. The wound showed no signs of infection and no previous history of bone infection was noted. He did have hardware to the 5th metatarsal from a prior surgery.

### Diagnosis/Assessment

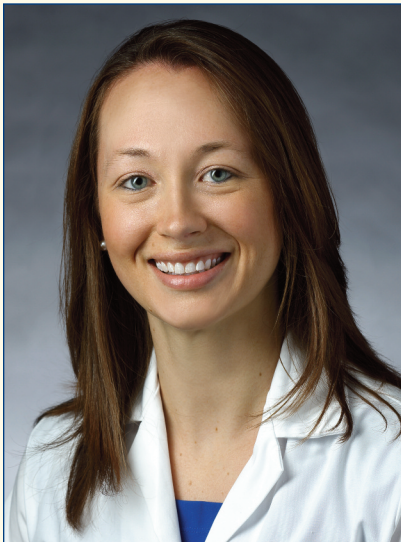
- Charcot neuroarthropathy of the right foot with open ulceration.
- Ulceration was not healing due to the increased pressure on the plantar lateral foot secondary to the Charcot arthropathy and fracturing through his midfoot.

### Pre-Surgical Planning and Considerations

- To promote wound healing, the patient's foot was placed in a total contact cast to relieve Charcot-related pressure. The wound healed normally within 4-5 weeks.
- Patient was instructed to reduce his Hemoglobin A1c level to less than 8%. After three months, the Hemoglobin A1c level had reached an acceptable level and the patient was scheduled for surgical reconstruction of the underlying Charcot arthropathy.
- Angiogram performed by vascular surgery confirmed that the patient's blood flow was sufficient to promote healing. He had adequate 3-vessel run-off to the foot.

### Treatment

- The patient underwent complex rearfoot and midfoot osteotomies and fusions to correct the abnormal shape of his foot and to alleviate lateral foot pressure. He was placed in an external fixator at the time of surgery to appropriately offload his bones during healing.
- Patient was non-weight-bearing for a total of 12 weeks and then transitioned to weight-bearing with physical therapy.



**Caitlin S. Zarick, DPM**

“Charcot deformity is rare, but it is frequently found in patients with diabetes and similar conditions that lead to wound problems. Because diabetes and incidences of Charcot are on the rise among younger people, it’s essential that they address this condition as soon as possible so that all potential treatment options, including surgery, can be fully considered.”

## Outcome

- The patient is now full weight-bearing in sneakers with diabetic inserts and gradually progressing back to his regular activities. Imaging confirms complete healing of surgical fusion sites and correction of the underlying deformity. He has no ulcerations and no pre-ulcerative areas on his foot.

## Conclusion

- Osteotomies and fusions and other reconstructive procedures are attractive limb salvage options for patients with Charcot arthropathy. Although not every patient is a candidate for surgery due to diabetes and other factors, such options should be considered to correct the deformity and prevent recurrence of ulcerations that can lead to infection and amputation.

Non-Profit  
Organization  
U.S. Postage  
**PAID**  
MedStar Washington  
Hospital Center



MedStar Washington  
Hospital Center  
110 Irving Street, NW, EB 7118  
Washington, DC 20010

---

## MedStar Washington Hospital Center 110 Irving St., NW Washington, DC 20010

To refer a patient, or to schedule an informational interview with Dr. Zarick, please call **855-203-6831**.

To learn more about Podiatric Surgery at MedStar Washington Hospital Center, please visit **[MedStarWashington.org/PodiatricSurgery](http://MedStarWashington.org/PodiatricSurgery)**.

MedStar Washington Hospital Center is a 912-bed, major teaching and research hospital. It is the largest private, not-for-profit hospital in the nation's capital, among the 100 largest hospitals in the nation and a major referral center for treating the most complex cases.

