Isolated Tension-Banding Fusion for Stage 3 and 4 Muller-Weiss Syndrome

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Disclaim and Notification

‘Isolated Tension-Banding Fusion for Stage 3 and 4 Muller-Weiss Syndrome’

by Andrea Gilgen

My disclosure is in the Final AOFAS Program Book.

I have no potential conflicts with this presentation.
Introduction

- Avascular necrosis of the lateral navicular of unknown origin
- Paradoxical pes plano-varus

The affected right foot showing the typical zic-zac deformity with paradoxical plano-varus.
Introduction

- Expulsion of the dorsolateral fragment + medialization of the navicular + talar lateralization
- Problems
  - Misconceive of the disease
  - No gold standard technique for stable correction of the deformity

Dorsoplantar and lateral view: Stage 4 disease
# Casuistics

- **Patients**  
  N = 10

- **Follow up**  
  2 to 35 month

- **Gender**  
  Female 8 / Male 2

- **Age**  
  63.5 y (44.0 to 82.3y)

- **Severe pain**  
  N = 10

- **Stage 3**  
  N = 3

- **Stage 4**  
  N = 7

- **X-rays**  
  Foot dp/lat, ankle ap, Saltzman view
Technique

- Medial approach to the TN joint + debridement

- Second lateral incision over the fractured navicular + removal of the fractured fragments

- Reduction using a tension-bending technique and fixation by staple

- Completion with 2 cannulated 5.5 mm screws
A 63 years old female patient with stage 4 Muller-Weiss disease. Pre- and 7 month after procedure.
Results

- Follow up 12 months

- Solid fusion after 8 weeks N = 8

- Solid fusion after 12 weeks N = 1

- Asymptomatic delayed-union N = 1

- Postoperative AOFAS score 81
Conclusion

- Tension-banding from the lateral side seems to be effective and successful
- Sufficient vascularisation of the medial navicular to achieve solid fusion
- Good clinical outcome does not depend on perfect anatomical reduction
- Isolated TN fusion can avoid extended hind- and midfoot arthrodesis
References


