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CASE REPORT

Fixation of Ankle Fractures with APTUS 2.8 Fibula Plates and APTUS 3.5 Tibia T-Plates

The Surgeon

Surgeon Name: Dr. T. Schepers MD PhD
Hospital: Amsterdam UMC location Meibergdreef

Dr. Schepers is a trauma-surgeon with over ten years of experience in complex foot ankle injury.
He has published over 150 scientific papers on the subject.

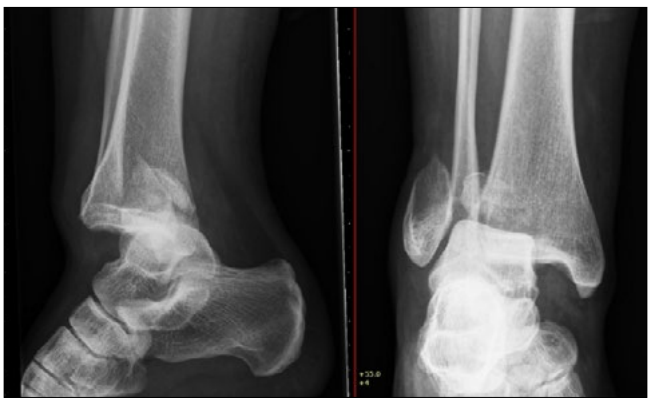
Introduction

Ankle fractures are amongst the most commonly encountered injuries. In case of instability these fractures need surgical stabilization. Key to success are anatomical reduction and preventing wound complications.

The Case

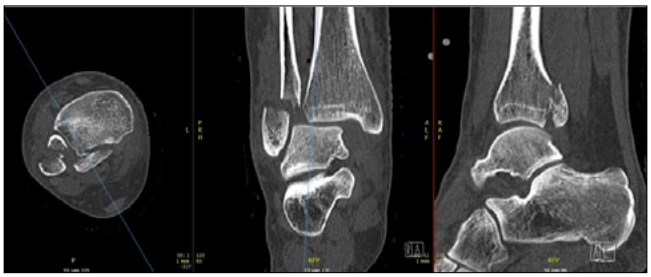
Patient Profile
A 36 year old female patient arrived at our Emergency Department by ambulance. There was no relevant prior medical history no relevant medical history. She fell from her scooter and noticed the abnormal position of her ankle.

At the emergency department a radiograph was made, showing a Supination External Rotation Type 4 ankle fracture with a dislocation of the ankle joint. The ankle was promptly reduced and a CT scan was made. Unfortunately the CT-scan still showed a sub-optimal reduction. For which a second reduction was performed and radiographs were made.



Clinical Findings/Preoperative analysis

The CT-scan showed a Weber-B type fibula fracture and a posterior malleolar fracture Bartonicek type 2. On the medial side the deltoid ligament was torn.

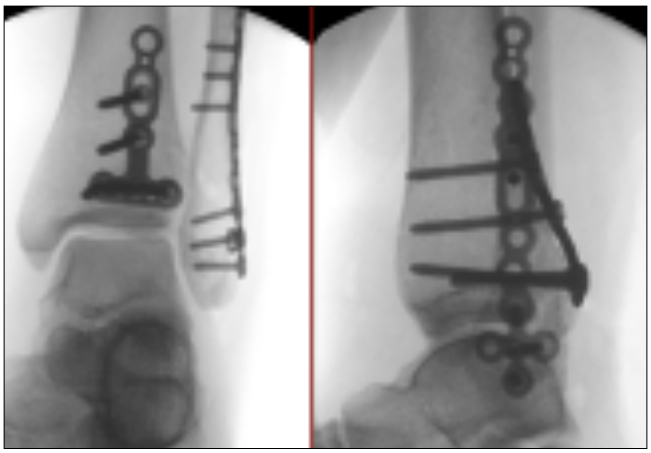


Surgical treatment

Seven days after trauma she was operated on in a prone position. A posterolateral approach was performed to address the posterior malleolus. The sural nerve was identified and spared throughout the procedure. An anatomical pre-contoured 3.5 mm T-plate was used to maintain the reduction. Via the same incision the fibula was approached and a 2.8 plate was used following reduction of the fracture.

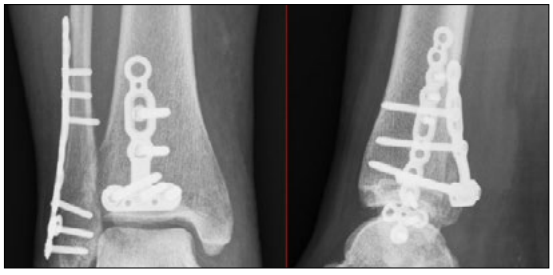
Intraoperative findings

The APTUS 3.5 T-plate fitted well posteriorly. The APTUS 2.8 Fibula plate allowed for an excellent stabilization of the fracture.



Postoperative treatment

Post-operatively the patient was kept in a cast, non-weight-bearing for 4 weeks and weight bearing for another 2 weeks after which the cast was removed and she was allowed to start weight bearing in a well fitted shoe. She was last seen for follow-up after six months and experienced no pain and had an excellent range of motion.



Conclusion:

Open reduction and internal fixation of an unstable ankle fracture using an anatomically fitted posterior 3.5 Tibia T-plate and a 2.8 Fibula plate provides good results.

References

1) Dingemans SA, Lodeizen OA, Goslings JC, Schepers T. Reinforced fixation of distal fibula fractures in elderly patients; A meta-analysis of biomechanical studies. Clin Biomech (Bristol). 2016;36:14-20. doi:10.1016/j.clinbiomech.2016.05.006

2) Schepers T, Van Lieshout EM, De Vries MR, Van der Elst M. Increased rates of wound complications with locking plates in distal fibular fractures. Injury. 2011;42(10):1125-1129. doi:10.1016/j.injury.2011.01.009

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