

CASE STUDY

Fixation of ankle fractures with APTUS 2.8 Fibula Plates and 2.8 syndesmotic screw

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Short Introduction on Surgeon: 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. Up to 20% of surgically treated ankle fractures have concomitant syndesmotic injury. Key to success are anatomical reduction and preventing wound complications.

The Case

Patient Profile

A 72 year old male patient was brought to the Emergency Department. His past medical history showed some cardiac arrhythmias for which he used medication. He slipped and fell during an icy winter day and injured his right ankle.

Clinical Findings/Preoperative analysis

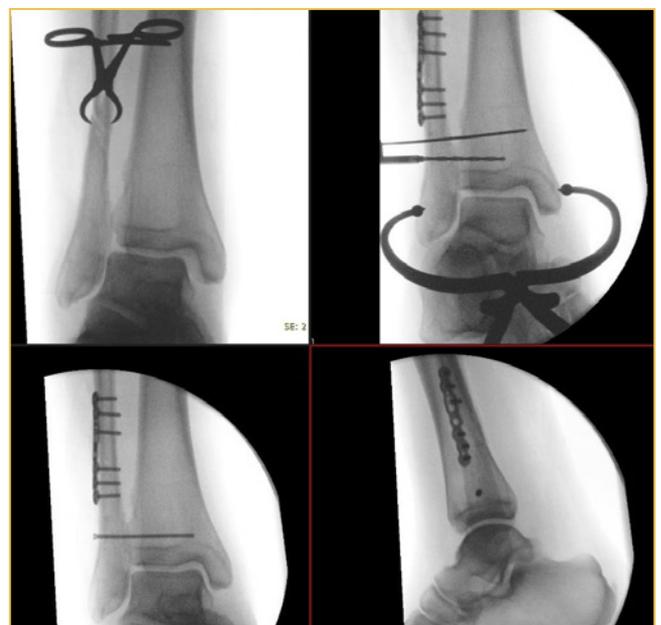
At the emergency department a radiograph was made and showed a Pronation External Rotation Type stage 4 or Weber C ankle fracture on the right side. There was no posterior ankle fracture, and on the medial side the deltoid ligament was torn (Figure 1).



Surgical treatment and intraoperative findings

The patient was operated on the following day.

A straight lateral approach was used on the fibula. Anatomic reduction was obtained using reduction clamps. After stable fixation of the fibula fracture the syndesmosis was tested, which showed clear instability. With direct inspection of the incisura the fibula was reduced first by hand, after which a temporary K-wire was added as a glidepath. Subsequently gentle compression was added using forceps and a 2.8 syndesmotic screw was placed. Image intensifier showed adequate reduction and stabilisation (Figure 2).



Postoperative treatment

A post-operative CT scan showed an adequate reduction of the ankle and syndesmosis (Figure 3).



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 he was allowed to start weight bearing in a well fitted shoe. He was last seen for follow-up after six months and experienced no pain, had an excellent range of motion, and was exceptionally happy with the end result. Weight bearing radiographs of both ankles showed a well healed ankle fracture in a good position (Figure 4).

As requested by the patient, and no medical necessity, the syndesmotic screw was left in place.



Conclusion:

Open reduction and internal fixation of an unstable ankle fracture using the 2.8 fibula system provided good radiological and clinical results.

References: Bone Joint J. 2016 Nov;98-B(11):1497-1504. doi: 10.1302/0301-620X.98B11.BJJ-2016-0202.R1.

Should syndesmotic screws be removed after surgical fixation of unstable ankle fractures? a systematic review. Dingemans SA, Rammelt S, White TO, Goslings JC, Schepers T.

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