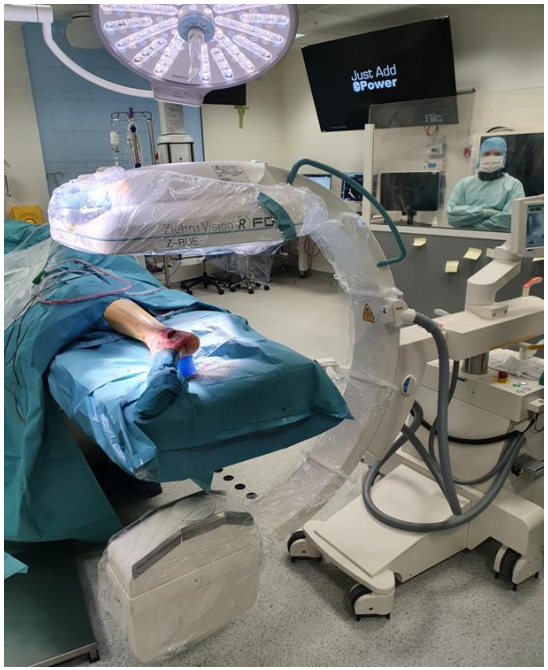
Fractures of the Talus and Calcaneus

AOT Advanced Principles of Fractur Management

Marianne Vestergaard Lind, overlæge
Ortopædkirurgisk Klinik, Rigshospitalet



Talus frakturer

Sjælden fisk

0.3% of all fractures
Younger males
Forced dorsiflexion of the ankle, direct trauma
High energy (Trafic, falling from hights)
OFTEN OVERLOOKED!!!

Diagnosis

- X-ray
- CT!!!
- Other injuries?
- SOFT TISSUE!!

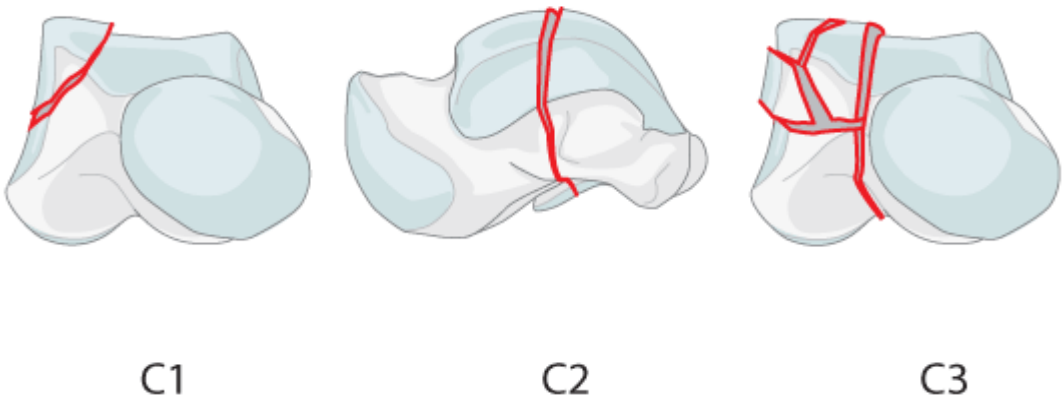
Classification

Talar Neck - Hawkins

Fig. 2. Hawkins talar neck classification; types I–IV.

Classification

Talar Body



Classification

Talar Body and Neck

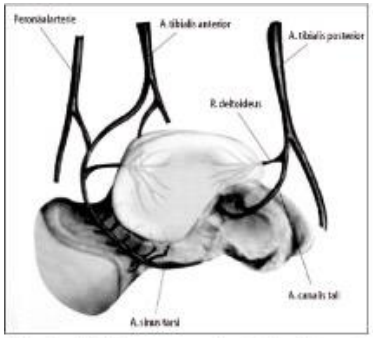


Abb. 1: Gefäßversorgung des Talus (Bonnaire F et al, Trauma Berufskrankh 2001; Suppl 2: 192-200)

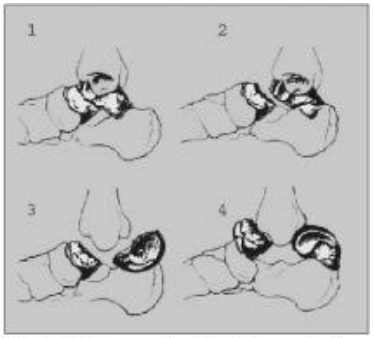


Abb. 2: Frakturtypen des Talushalses nach Hawkins (Eberl R et al, Trauma Berufskrankh 2004; 6: 158-164)

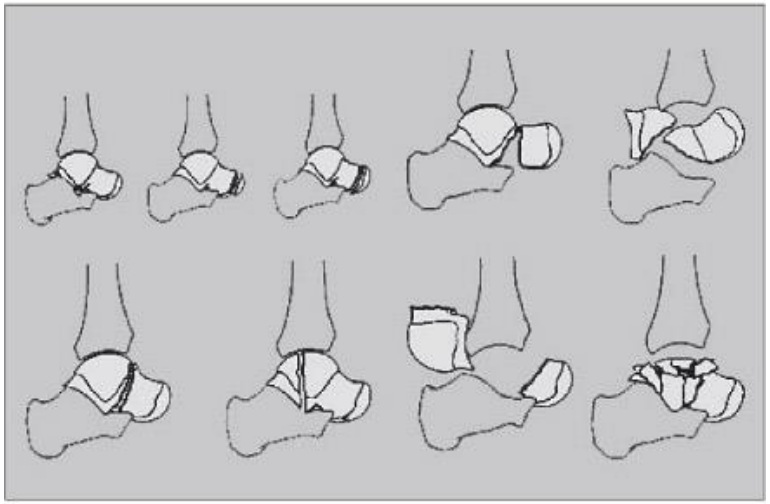


Abb. 3: Frakturtypen I bis IV nach Marti-Weber (Eberl R et al, Trauma Berufskrankh 2004; 6: 158-164)

Treatment

Highly specialized function

Centralized treatment, experienced surgeons, few hands

Dislocations are reduced ASAP !!!!!

TIMING

Behandling

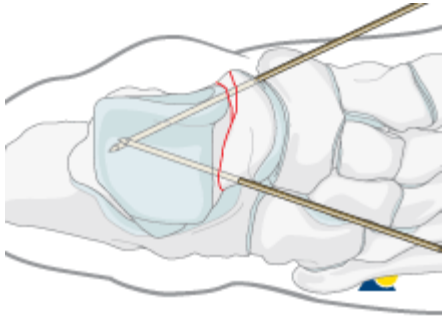
Adgange

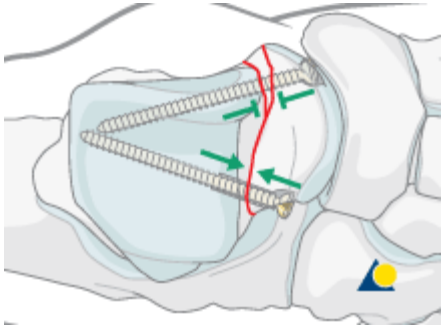
Anteromedial el. -lateral adgang (evt med osteotomi af med malleol), ofte begge adgange for kontrol af reposition.

Posterolateral el. –medial adgang (bugleje)

Behandling

Skruerne

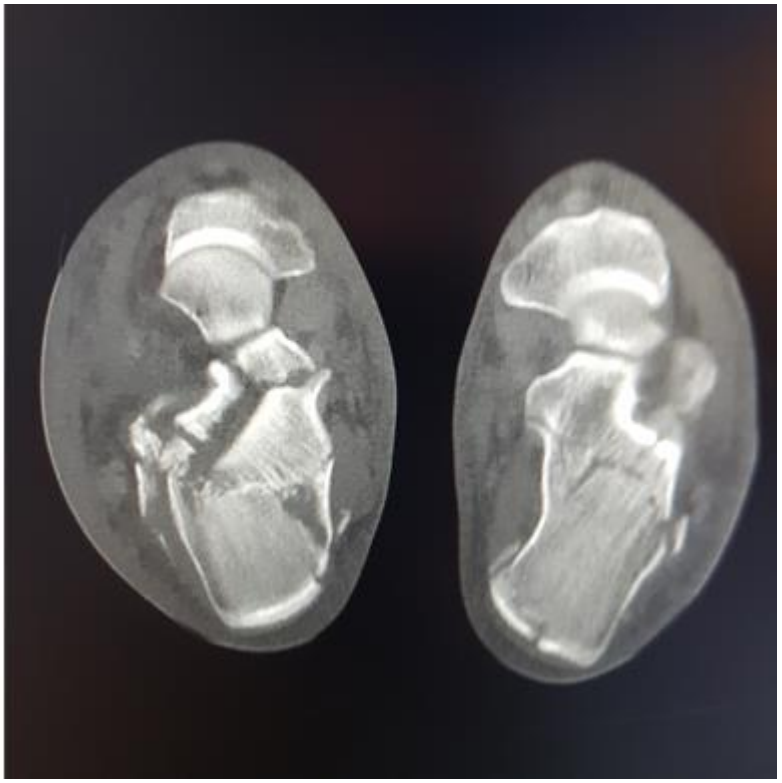




Complications

- Stiffnes
- Pain
- AVN

Fractures of the Calcaneus



Epidemiologi

3% of all fractures (No 15)

Young Males (20-40 y.o.)

Work related accidents, Jump/fall from hights, Motor Vehicle accidents

Diagnosen

X-ray

CT !!!

OBS Compartment

OBS Other Injuries

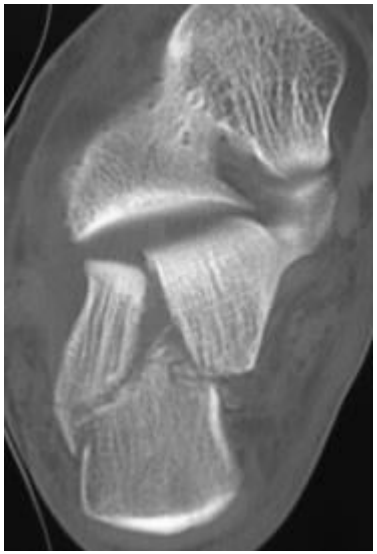


Fig 20.4
Røntgenprojeksjoner for fremstilling av hælbenet

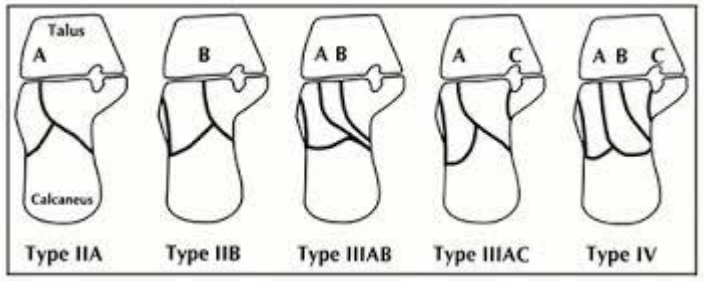
Fig 20.2
Bøhlers vinkel og Gissane´s vinkel

Classification

Beak Fracture

Classification

Intraarticular



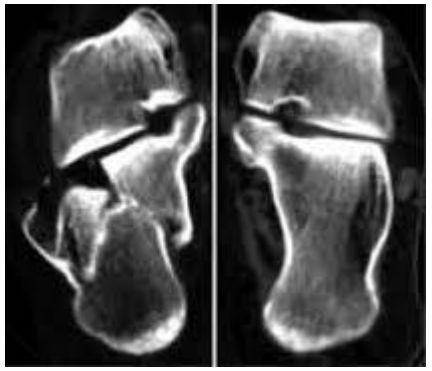


Table 39-1

Sanders Classification

Type I	All nondisplaced articular fractures (less than 2 mm)
Type II	Two-part fractures of the posterior facet
Types IIA, IIB, IIIC	Based on location of primary fracture line
Type III	Three-part fractures usually featuring a centrally depressed fragment
Types IIIAB, IIIAC, IIIBC	Based on location of primary fracture line
Type IV	Four-part articular fractures

Treatment

Highly specialized Function

Elevation in Hospital (if possible)

Obs. SKIN and COMPARTMENT SYNDROME

Treatment

Beak Fracture

Surgery Acute – risk of skinnecrosis

2 or more screws, percuteneously

Behandling

Andenæb/ beak

Treatment

Beak Fracture

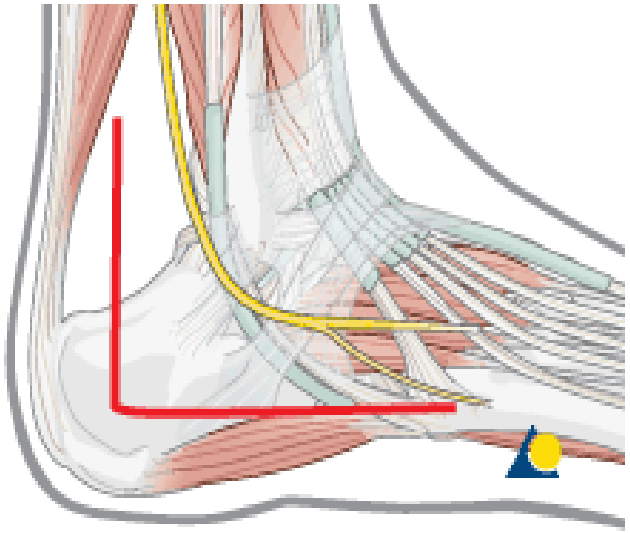
Treatment

Intraarticular Fractures

Who?
Age < ca. 60 år?
Otherwise well (co-morbidity)
Smoking? Alcohol?Compliance?
What?
Sanders 2-3 – ORIF
Sandes 4 – primary subtalqr arthro desid
Short, wide hindfoot, valgus-deformigy, impingement under lat. malleol, depression of posterior joint facet
When?
When the soft tissue allows for surgery

Treatment

Surgical Technique



Complications

Wound Healing Problems 10-25%

Deep Infections 5%

Treatment

Surgical Technique

Treatment

ORIF

Treatment

Primary Arthrodesis

And how do the do?

Expected result from an intraarticular calcaneus fracture

Flat foot, with a broad heel in varus
Pain whennwalking
Reduced subtalar mobility

Expected gain from surgery

Restoration of the form of the bond/foot
Reduced need for secondary arthrodesis
Less pain
Better subtalar movement

JBJS Am 2002; 84: 1733-1744: Buckley et al: Operative compared with nonoperative treatment of displaced intraarticular fractures: a prospective, randomized, controlled multicenter trial.

Take Home Message

”The man who breaks His heel is DONE”

Frederic J. Cotton

1916

TAK