

OSTEOCHONDRAL LESION OF THE TALUS IN FOOTBALL PLAYERS : ARTHROSCOPIC FIXATION

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Osteochondral lesions of the talar dome

- 6.5 per 100 sprains
- Average age 20 to 30 years (?)
- slight male predominance
- Medial lesions are more common . They are typically located at the posteromedial talar dome and are typically deep and cup-shaped . These may be traumatic or nontraumatic in origin .
- Lateral lesions are more commonly associated with acute trauma . They are typically located in the anterolateral aspect of the talar dome .

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- Frequent in **football players** due to the ankle sprains and repetitive microtraumas during sprinting , cutting , tackling and kicking

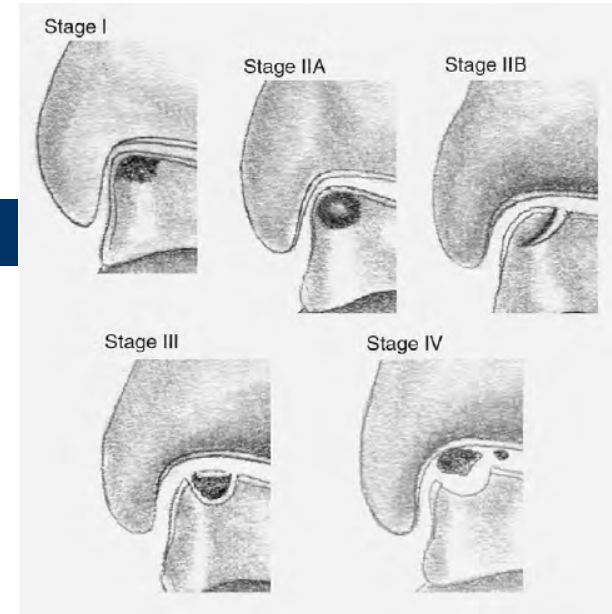
OLTs classifications

- Bernt & Harty (1959) . Radiographic criteria Lateral lesions .
- Ferkel (1990) . Arthro- CT .
- MRI based may overestimate the extent of OLTs and therefore does not direct treatment .
- Arthroscopic based focuse on cartilage , are unable to consider bony component of lesion and therefore does not offer treatment guidelines .



combination

- **Anderson & Crichton (1989) MRI**
 - stage 1 : trabecular compression
 - stage 2a : subchondral cyst
 - stage 2b : nondetached fragment
 - stage 3 : non displaced fragment
 - stage 4 : displaced fragment
- **Cheng et al (1995) ARTHROSCOPIC**
 - stage A : smooth , intact , but soft or ballotable cartilage
 - stage B : rough surface
 - stage C : fibrillation and/or fissuring
 - stage D : flap present or bone exposed
 - stage E : loose , undisplaced fragment
 - stage E : displaced fragment



treatment options

- No established treatment algorithm
- Early return to sports is very important
- Depend on the stage of OLTs
- **conservative**
microfractures
drilling
fixation
autologous chondrocyte implantation
stem cells transplantation
hyaluronate membrane
mosaicoplasty

Common technical problem

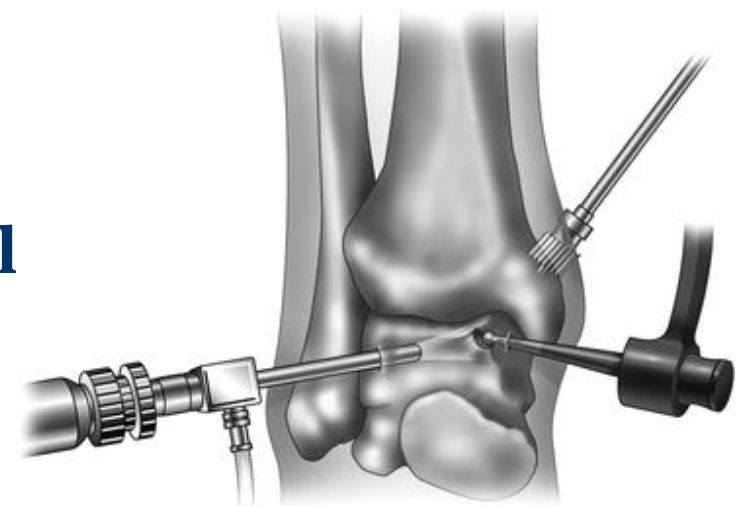
- The **location** of the chronic non-traumatic lesion which - in the vast majority of the cases - **are medial and slightly posterior** and therefore ...
- Difficult to **access** them when **drilling and/or fixation** is indicated

Solution ?

- **Medial malleolus osteotomy**

But

- **Arthroscopically ??**
Special target devices
“transmalleolar” portal



Purpose of our study is to present

- Our experience with **arthroscopic**
- ... **fragment fixation** in combination with antegrade drilling using a bioabsorbable dart
- ...and a **special technique to approach as vertical as possible the lesion , in posteromedial microtraumatic cases**

Method & results :

- **2015 -2016**
- **5 football players**
- **16 – 20 years old**
- **4 U19 & 1 semiprofessional level**
- **Symptomatic medial (and slight posterior) OLTs**
- **4 stage IIb – 1 stage III (Anderson)**
- **Smooth , soft , “ swollen ” cartilage
(stage A Cheng)**

Key points



- **high anteromedial portal**
- Access to the lesion through an **anteromedial bony groove**
- **Fixation** with an absorbable dart :
“ smartnail ” 1.5 – 16 mm CONMED corporation
USA
- 2-3 **antegrade drillings** with the special (1.5 mm)
drill , used for the smartnail
- No iatrogenic chondral lesion

postoperatively

- **No immobilization**
- **Early ROM**
- **Non-weight bearing for 4 weeks**
- **Partial weight bearing 4 weeks more**
- **Low intensity jogging 3 ms postop**
- **Rehabilitation program focused on proprioception , speed reaction and strengthening .**

results

- **Return to unrestricted sport activities 6 ms postop**
- **Full ROM**
- **None complained for pain at the anteromedial aspect of the joint**

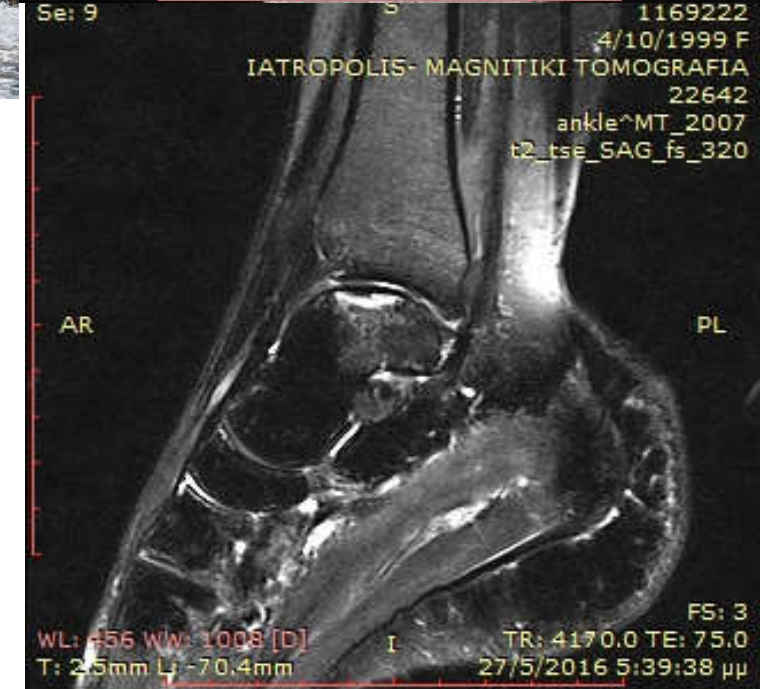
results (x-ray , MRI , CT)

- **Improvement of talus bone oedema**
- **4 pts : healing of the fragment**
- **1 pt : incomplete integration without pain**
- **Angle of the dart trace to the tangential line to the upper surface of the lesion was between 60 – 64 degrees**
- **Insignificant defect of the distal anteromedial articular surface of the tibia**



Case presentation

- 17 yo
- nontraumatic
- 5 months symptoms



- the first view of a “soft, ballotable & swollen” cartilage (AL portal)



check through the classic AM portal



- **Initial “ cleaning ” of the anteromedial corner with RF & shaver (std AM portal)**



- **Confirmation of the lesion**



Creation of a **bony groove**

- **High anteromedial** portal under direct arthroscopic view



Evaluation the
accessibility
(full plantar flexion)



**drilling with the
special (1.5) drill**



**... and finally fixation with
smartnail**

4.5 ms post.op



Conclusion

Depending on the stage ...

- **fixation of the fragment** is a reasonable option of treatment (in terms of maintenance of healthy hyaline cartilage) , with good results concerning the healing of the lesion and the resolution of the symptoms .
- An **anteromedial bony groove** can offer a satisfactory access to the posteromedial lesions without the potential complications and the elongated rehabilitation period of the other methods

**Thank you
for your attention**

**Ευχαριστω
για την προσοχη σας**



surgical technique

- **Anterolateral (viewing) and anteromedial (working) portals**
- **Confirmation of the location arthroscopically and with fluoroscopy**

surgical technique

- **High anteromedial portal , under direct arthroscopic view .**
- **Groove (using an acromionizer) tangential to the anteromedial corner of the distal tibia .**