Complicated talus fractures, Qatar experience

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My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
• **Introduction**
  - Talus fractures are associated with high morbidity. They result from high energy axial load, have significant consequences related to the vascularity of the bone, its large cartilaginous cover and its contribution to important weight bearing joints.
  - They are less common fractures. About 15 to 25 cases operated annually in Hamad Hospital.
  - This represents around 0.7% of operated fractures in the orthopedic unit.
  - This study aims at analyzing complications associated with talus fractures to consider ways to improve care.

• **Methods**
  - A retrospective analysis of cases presented in the years 2008 to 2010 was done.
  - X Rays and patients files were retrieved and data collected. Patients were invited to the clinic for follow up.
  - Some of the complicated cases were selected for this presentation to represent some of the preliminary results we found.
In contrast to hip AVN, no collapse of talar dome with AVN was detected in any of the registered cases.

Figure 1, for case No 1

Talar dome AVN after fracture neck of talus. No collapse seen on follow up.
Pain is variable after not reduced comminuted talar body fracture

- Case 2
  - 22-year-old male laborer with comminuted fracture talus treated with temporary Steinmann pin. He can walk, work, run, and play for hours without pain.

Figure 2 for case 2
No pain despite comminution

- Case No 3:
  - 42-year-old male with open comminuted talus fracture treated with debridement and wires fixation.
  - Problems:
    - Avascular necrosis
    - Collapse, due to initial injury and failure of reduction.
    - No additional collapse of AVN segment was observed
    - Cartilage defects and early osteoarthritis resulted
  - Patient is working as foreman in construction with some moderate pain. Surgery was offered. He considers it

Figure 3 for case No 3
Pain variable in comminuted fractures

Case No. 4

23 y/o security officer fall 3 years ago. Despite comminution he **can walk hours without pain**, **but cannot run**
Could surgery improve his condition?

- Figure 4, for case No.4

Concentrated pressure areas assumed to be a contributor to pain.

Case No. 5

22 y/o student with posterior talar body/process fracture.
Had **significant pain on walking**
Concentrated pressure areas assumed to be the contributor to pain.
ORIF was done. Pain relieved

**Figure 5, for Case No.5**
Multiple screws are more likely to be needed for comminuted fractures

- Figure 6 for case No 6
Medial malleolar osteotomy approach found useful in comminuted talar body fractures frequently in combination with other approaches

- Figure 7 for case No.7
Results:
In contrast to hip-AVN, No Apparent collapse of talus dome with AVN was observed in any of the detected cases.
Pain was found variable after non reduced comminuted talus fractures:
Pain on running rather than pain on walking was frequently observed.
Concentrated pressure might contribute to pain.
Medial malleolar osteotomy approach was found useful for comminuted talar body fractures,
However combination with other exposures was frequently needed.
Multiple screws were most frequently needed for fixation of comminuted talar body fractures.
Better results were observed when anatomic reduction and adequate fixation was achieved.
Conclusions:
. In contrast to hip AVN, No apparent collapse of talar dome with AVN was observed in this series
. Variable pain in patients with neglected comminuted talar body fractures
. Best results after anatomic reduction
. Meticulous initial surgery is recommended.

References