Posterior and posterolateral plating of fibula fractures: Results at a minimum of one year follow-up

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My disclosure is in the Final AOFAS Mobile App.

I have no potential conflicts with this presentation.
Distal Fibula Fracture

- Common injury
- Various means of surgically fixing it with a plate
  - Straight lateral
  - Anterolateral
  - Posterior/Posterolateral
Posterior/Posterolateral plating

- Biomechanically superior
- Hardware less prominent and therefore less likely to need removal
- Some concern for injury to the peroneal tendons
- Hypothesis: posterior and posterolateral plating will have a good to excellent functional outcome with minimal problems related to the hardware
Methods

- Distal fibula ORIF between 1-1-10 and 12-31-13
- 95 patients
  - 38 without minimum one year F/U
  - 57 eligible
    - Charts retrospectively reviewed to assess whether patients had:
      - Any ankle pain
      - Pain related to hardware
      - Had had removal of hardware (ROH) surgery
- 23 patients reached to obtain FAOS scores
Results

* Mean 28.4 months post-op
* 13/57 (22.8%) patients with ankle pain
* 9/57 (15.8%) had ROH surgery
* 3/48 (6.3%) with retained hardware with ankle pain related to hardware
Results

* Mean time to ROH surgery was 20.1 months (SD 14.9)
* 7/9 patients with ROH had it done within 15 months of index surgery
* Only 1/9 patients with ROH had any ankle pain after ROH
Results

* FAOS scores
  * Pain 86.1 (SD=18.9)
  * Activities of daily living 90.0 (SD=18.0)
  * Symptoms 81.8 (SD=21.5)
  * Sports 77.8 (SD=32.7)
  * Quality of life 65.2 (SD=32.8)
Brown et al had a 23% rate of hardware removal or desired hardware removal in a series of ankle fractures with lateral hardware placement. This rate is roughly equivalent to that in our study.
Discussion

- Posterior and posterolateral plating of distal fibula fractures achieved good to excellent results in this cohort.
- Posterior and posterolateral plating has a similar rate of subsequent hardware removal, yet is biomechanically superior.
References
