Short term results of the supramalleolar osteotomy for ankle osteoarthritis

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My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
Purpose of study

To evaluate the short term clinical results of supramalleolar osteotomy in moderate ankle osteoarthritis and prognostic factors
Materials & Methods

- January, 2008 ~ May, 2011
- 53 cases (53 pts)
- M : F = 12(23%) : 41(77%)
- Age : 52.0(20 ~ 71) years
- Mean F/U : 14.6(8 ~37) months
- All trauma Hx(+)

Takakura stage of ankle OA

Stage 1: no narrowing of the joint-space, but early sclerosis and formation of osteophytes
Stage 2: narrowing of the medial joint space
Stage 3: obliteration of this space with subchondral bone contact
  3a: obliteration of the joint space was limited to the medial malleolus
  3b: obliteration extended to the roof of the dome of the talus
Stage 4: obliteration of the whole joint space with complete bone contact
Surgical technique

- Aescula® open-wedge plate

- Arthroscopic debridement (possibly c microfracture) was done prior to osteotomy in all patients
Fixation with a plate and screws above and below the osteotomy site and **allograft bone chip** packed into the osteotomy gap
Results(1)

- VAS score(7.4->3.3), AOFAS score(37.5->70.5)

- In stage II and IIIa, preoperative VAS scores and AOFAS score were improved significantly better than stage IIIb.

- In stage IIIb (two cases) one patient was **unsatisfied** with the results, another patient also was managed by **total ankle arthroplasty** after all five months after supramalleolar osteotomy.
Results(2)

(According to talar dome chondral lesion ratio)

Group A ( <30% , N=31) VS Group B ( ≥ 30% , N=22)
Results (3)

*Complication*(11 cases: 21%)

1. Superficial wound problem (3 cases: 6%)
2. Delayed union (6 cases: 11%)
3. **TAA conversion** (2 cases: 4%)
   - d/t OA progress & pain
Conclusion

- Supramalleolar osteotomy is **technically demanding** and requires an extensive and careful **preoperative planning**.

- Supramalleolar osteotomy is effective treatment option for ankle osteoarthritis especially in radiographic stage **II** and **IIIa**.

- Involved **chondral lesion ratio** (although radiologic stage **II or IIIa**) by arthroscopic finding & MRI maybe important prognostic factor when supramalleolar osteotomy is considered.