Ankle Arthrodesis through a Modified Scranton Method

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NO CONFLICT TO DISCLOSE

< Ankle Arthrodesis through a Modified Scranton Method >

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My disclosure is in the Final AOFAS Mobile App.

I have no potential conflicts with this presentation.
Ankle arthrodesis is very useful method of the treatment for ankle disorders with limited ROM.

There are many reports depending on various approaches and ways of fixation.

**<Scranton method>**

*Scranton PE, et al, JBJS Am, 1985*

- Resection of anterior 2/3 of medial malleolus
- Bone graft from resected bone
In this study we report ankle arthrodesis through a **modified** Scranton method.

**<Our Modified Scranton method>**

- No fibula osteotomy
- One cannulated screw
- Locking plate (for humerus) fixation
Patients

27 ankles

- Age 63.2 y.o. (45-82)
- Follow up 20.6 mos. (3-36 mos.)
- Etiology
  - Osteoarthritis 16 ankles
  - Paralytic foot ankles 6
  - The others 4 ankles
- Implant
  - NCB plate® ankles 9
  - Mode plate® +Acutrack plus® 18 ankles
- Additional procedure
  - Fibula osteotomy ankles 7
  - Achilles tendon lengthening ankles 2
1. Resection of ant. 2/3 of medial malleolus
2. Separation of cancellous and cortical bone, which is used for bone graft
3. Spread of ankle joint
4. Curettage of residual cartilage till exposing subchondral bone
5. Multiple drilling to pass into medullary canal
6. Temporary fixation with K-wire and cancellus bone grafting, then fix with a cannulated screw.

7. Cortical bone grafting.

8. Fixation with locking plate for humerus.

9. Suture of deltoid ligament to the plate.

10. Repair of the periosterum.
Result

<Operation time>
Ave. 193 min. (150-294)

<JSSF ankle and hindfoot score>
39 → 86

<Complications>
Implant failure due to falling down → Re-fixation

Final bone union 27/27
Case 1

1. pre-op.

Dor. flex.: -15d

2. op.

Achilles tendon lengthening

Resection of ant. 2/3 of medial malleolus

Fixation with cannulated screw and locking plate

3. post op. X-p

Bone union is appearing around compression screw.

4. 2mos. after op.

5. 9mos. after op.
<Advantage of Original Scranton method>

- Good view of tarocrural joint
- No need of bone grafting
- Preservation of medial and lateral malleolus, which lead to good cosmetic appearance
Discussion

<Advantage of Our Modified Scranton method>

- No fibula osteotomy
- One cannulated screw
- Locking plate (for humerus) fixation

- Minimum shortening
- Preservation of lateral wall
- Solid fixation
- Compression of arthrodesis site
- Easy plating
- Solid fixation
- Early postoperative care
We introduced our modified Scranton method of ankle arthrodesis.

This method could become one of the useful method of ankle arthrodesis.

References