Realignment Surgery for Severe Talar Tilt Secondary to Paralytic Cavovarus Foot

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Introduction
This lecture includes brief review of current approach to the management of severe talar tilt, which are distal tibial osteotomies, ligament surgeries for lateral ankle instability and correction of hindfoot deformity.

This lecture emphasizes that the joint preserving surgery can be successful in varus ankle osteoarthritis caused by paralytic cavovarus. In ankle osteoarthritis with severe varus talar tilt, ankle fusion has been performed because there has been no report of successful joint preservation surgery before an article by Lee et al.¹

This lecture is based on the experiences 25 cases of varus ankle osteoarthritis from paralytic cavovarus including the cases reported in previous article.

Method of correction
In most cases, soft tissue procedures like tendon transfer or lengthening were not able to correct the long term rigid deformity. Osteotomy without arthrodesis also was inadequate procedure, so arthrodesis of the hindfoot and/or distal tibial osteotomy was required to correct the deformity.

Triple arthrodesis was most commonly performed arthrodesis, and various soft tissue and bony procedures were performed. Dorsal closing wedge osteotomy, lateral closing lateral translation calcaneal osteotomy, tibialis anterior and/or tibialis posterior transfer were commonly performed procedures.

Discussion and conclusion
There are several reports on realignment surgeries in the lower leg and hindfoot for joint sparing of varus ankle osteoarthritis. However talar tilt could not be greatly improved by any method on the distal tibia, ankle or hindfoot. Therefore ankle osteoarthritis with large talar tilt was not regarded as good indication for joint sparing surgery.
Arthrodesis of the hindfoot has been performed for stable plantigrade weightbearing, however ankle arthrodesis was a typical procedure for an ankle osteoarthritis in paralytic patient. Pantalar arthrodesis would be much more disabling than mobile ankle with stiff foot, therefore current presenter attempted to preserve the ankle joints with large talar tilt of mean 10°, which has been considered as incorrectible in previous reports.

In conclusion, talar tilt could be corrected to minimal degrees by combination of foot and distal tibial procedures.

Reference

1. Lee, WC; Ahn, JY; Cho, JH; Park, CH: Realignment surgery for severe talar tilt secondary to paralytic cavovarus. Foot Ankle Int. 34:1552-1559, 2013.