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SYMPOSIA 5:

The Severe Varus Ankle With and Without DJD:
What to do?

Moderator:

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Analysis of the Varus Ankle

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1. When is history of the problem important?

Because we are dealing with the varus ankle, it is important to know from the patient what prior injuries they have had to their ankle. Often times, it may have been multiple sprains which would alert me to the fact that their ankle is probably unstable. Then, I will have to make a decision on whether or not I will have to reconstruct the lateral ankle ligaments or whether I can get by with a medial peel of the deltoid or have to do a medial malleolar osteotomy.

If they have not really had a significant sprain and they still have significant varus, I have to check their hindfoot alignment carefully. If they have a varus hindfoot with the ankle in neutral, then I am thinking I may need a lateral calcaneal sliding/closing wedge osteotomy. Furthermore, if they do not have a significant source of trauma for their condition, it is very important that I examine the foot when the ankle is aligned and balanced at surgery. It is then that I will do a dorsiflexion closing wedge osteotomy for a forefoot driven hindfoot varus.

2. Is the varus a bony or just soft tissue problem?

Occasionally an ankle that presents in varus is solely the result of ligamentous laxity from prior sprain or a single significant sprain. Thus, if I can balance the ankle with a medial release I will have the foot in proper position. However, there is a distinct distal tibia varus that is not always appreciated in the clinic on x-rays. It is only when I have my tibial guides in place that I realize that the deformity lies in the distal tibia. In that instance I have even resorted to simultaneous distal tibial osteotomy to correct the varus, plate the deformity and proceed with the ankle replacement.

3. What studies, stress tests are needed for completeness? How do you tell the degree of deformity?

Standing x-rays are my main tools. If there is some history of trauma to the tibia with a deformity, I will get standing x-rays of the legs to ensure I am not making a big mistake by not aligning the knee either separately with an osteotomy or a knee replacement.

I do not really stress the ankle in the clinic. Often times, these arthritic ankles do not move very well and stability is not easily detected. I have on occasion gotten separate lateral x-rays of the talus/calcaneus in patients with severe varus. This is because the x-ray beam was aimed at the ankle and the talus is so far rotated, I cannot tell how much talar superior surface is available to work with at the time of surgery.

4. When is consideration of the midfoot and hindfoot in the deformity important?
When the patients have already had a triple arthrodesis or talonvicular arthrodesis I am always worried that I will have to do more. For example, if the patient had a subtalar or talonavicular fusion in a severe varus ankle that I corrected, I would have to be prepared to do a medial sliding calcaneal osteotomy (to bring the calcaneus back under the tibia if they were now in valgus) or a Silver, dorsal wedge opening osteotomy of the first cuneiform to bring the foot plantigrade and allow to patient to have a foot with an equal pressure tripod of the calcaneus and first and fifth metatarsal when standing.

5. What considerations do I have to make with regard to the knee? How and when do I handle a knee deformity or pain in conjunction with my treatment of the ankle?

If the patient has a severe varus of the knee it can accentuate the varus of the ankle. I treat the patients’ worst pain. Thus, if the worse pain is in the knee I urge them to have a knee replacement first or an osteotomy. If the patient’s pain is worse in the ankle then I go ahead and treat the ankle first. I am unaware of any failure of an ankle for which the knee was responsible. Most, but not all of the time, they are independent of one another.

However, I have seen valgus knees with varus compensatory ankles. In this instance I have had to warn patients that they might require knee surgery down the line to make adjustments for their new anatomic ankle.

One thing I never do is to cut the ankle at a compensatory angle for the knee. I cut the ankle out at 90 degree in the coronal plane and just a few degrees of anterior opening. I will take care of the knee later if necessary.

6. Is there a role for conservative care? (Braces, shoes, orthotics)

Of course, if the patient's condition is mild or moderate and they do not want surgery, I always urge them to try ankle braces for stabilization. They do not have to wear them full time, but may find them effective when they are more active. Shoes with laces to make them stable and a lateral post or build up can also help relief pain the ankle. Orthotics too can help and I often use commercial instead of custom orthotics which, quite frankly, are often more comfortable for the patient.

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