Periarticular Osteotomy in Treating Ankle Arthritis

Foot & Ankle Category: Ankle Arthritis

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Introduction
A retrospective control study to evaluate Periarticular osteotomy in treating asymmetrical arthritis of the ankle.

Methods
Sixty-five patients were chosen with asymmetrical ankle arthritis between Feb 2005 to May 2011. All the cases were performed the surgery of Periarticular osteotomy including supramalleolar tibial osteotomy in 20 cases, supramalleolar tibial and fibular osteotomy in 12 cases, supramalleolar osteotomy combined with calcaneal osteotomy in 33 cases. Forty-three cases got ligament reconstruction procedures. Forty-three of those patients were female and the other twenty-two were male. The age of surgery ranged from 35 to 74 years old (mean, 55.5). According to the Takakura classification of ankle arthritis, there were 29 cases in grade 2, 32 cases in grade 3 and 4 cases in grade 4. The AOFAS-HA score and radiographic examinations including TAS and TLS were recorded and compared before and after surgery. Twenty patients with ankle fusion and eleven with ankle replacement procedure at about the same time were collected and evaluated with AOFAS score.

Results
Fifty-nine patients were followed up. The average follow-up time was 35.7 months (7 to 94 months). All the patients got bone healing. The average healing time was 7 to 8 weeks. Average postoperative AOFAS -HA score 12 months after surgery was 78.6 (compare with49.7 preoperatively, 2 cases were excluded due to follow-up time less than 12 months ). Average postoperative TAS was 93.9 degrees 6 months after surgery (compare with86.1 degrees preoperatively); The TLS in 5 cases were abnormal preoperatively (70.0 degrees in average) and improved to 81.5 degrees in average 6 months after surgery. Delayed wound healing occurred in 5 cases and were solved with wound care. Forty-two patients felt excellent, 15 felt good and 2 patients felt the result of fare. The mean AOFAS scores of ankle fusion and ankle replacement group postoperatively were 73.4 and 83.7 respectively compare to 43.5 and 50.9 preoperatively.

Conclusion
Periarticular osteotomy is a sound method in treating asymmetrical arthritis of the ankle. The short term result is equivalent to ankle fusion or ankle replacement. This procedure can alter or decrease the contact pressures on the degenerated cartilage with mechanical realignment and can prolong the life span of the ankle.