Peri-talar Osteotomy as Part of Treatment of Talar Osteochondral Defect of Varus Ankle

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Category: Ankle

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Introduction/Purpose: The etiology of osteochondral defect (OCD) of talus is not fully understood. Besides trauma, malalignment of ankle or hindfoot may play a role in the development of OCD. The aim of this study is to assess the efficacy of peri-talar osteotomy in addition to routine treatment of OCD of talus.

Methods: This is a retrospective study of 52 cases of varus talar OCD during the period of 2009.9 to 2014.12. Micro-fracture or autograft transplantation were applied for the OCD first according to the dimension of the lesion in all cases. Then peri-talar osteotomy were performed to correct ankle or hindfoot mal-alignment in 26 cases according to the position of varus deformity, including 18 supramalleolar osteotomy, 6 calcaneal osteotomy and 2 combined distal tibial and calcaneal double osteotomy. Pre- and post-operative radiographic parameters of TAS, TTS, TLS angles and MoA were measured on mortise view, lateral view and hindfoot alignment view respectively. AOFAS-AH score, VAS score and SF36 score were performed to assess both subjective and objective outcome.

Results: For the osteotomy group, there were statistically changes (P < 0.05) radiographically (TAS, TTS, MoA, TLS) after surgery. While the radiographic parameters didn’t change in the group without corrective osteotomy. AOFAS-AH score and VAS score increased significantly (P < 0.05) in both the osteotomy group and the non-osteotomy group. The SF36 scores score increased significantly (P < 0.05) in the osteotomy group while not significant in the non-osteotomy group. The AOFAS-AH and SF36 scores were statistically higher in the osteotomy group after surgery (p<0.05), and the VAS score were not statistically different in two groups. There were 5 out of 26 revised cases in the non-osteotomy group while 2 out of 26 revised cases in the osteotomy group.

Conclusion: Peri-talar osteotomy in addition to routine treatment of OCD of talus results in better radiographic and functional outcome and lower recurrence for patients of varus talar osteochondral defect. Mechanical malalignment may contribute to progression of OCD of talus and thus should be corrected simultaneously.

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