

Use of retrograde sign nail in ankle arthrodesis: Is it implant of choice? A series of 100 cases at Ghurki Trust Teaching Hospital, Lahore, Pakistan

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Background: Tibiotalocalcaneal arthrodesis is a salvage and procedure of choice for hindfoot problems that affect both the ankle and subtalar joints. The indications for this surgery are arthritis, neglected ankle trauma, osteonecrosis of the talus, severe mal-alignment deformities and significant hindfoot bone loss.

Objective: To determine the clinical and radiological outcome of tibiotalocalcaneal arthrodesis with retrograde intramedullary sign nail in patients with tibiotalar and subtalar joint pathologies.

Materials & Methods: It was descriptive case study on 100 patients from September 2012 to December 2016 admitted either through OPD or Emergency at Orthopedics Unit of Ghurki Trust Teaching Hospital Lahore. After taking detailed history, clinical examination and investigations, the patients underwent ankle arthrodesis using retrograde sign nail under image control. Patients were discharged on 2nd or 3rd post-operative day and followed in Out Patient Department. Splint was advised for 2-3 weeks and non-weight bearing for 6 weeks. Radiographs were done on follow up visit to assess the alignment and later to assess healing. Patients were allowed weight bearing after 6 weeks. Outcome measures were assessed in the form of radiological bony union, AOFAS score, patient satisfaction score and post-operative complications related to the procedure. Data were initially entered on preformed pro forma and later on SPSS 17.0 version were used for data analysis.

Results: There were 100 patients who underwent arthrodesis and fixation. There were 82% male and 18% female with mean age of 41.5 ± 4.5 years. The patients who need this procedure having different pathologies; among them 23 having rheumatoid arthritis, 59 were post-traumatic, 11 having degenerative osteoarthritis and 7 having neuropathic pathology. After 12 months radiological union were found in 91 patients (91%), non-union in 4 patients (4.0%) and 5 patients were lost in follow up. Pain improves in all 91 (91%) patients who having radiological union and were fully satisfied with the procedure. Among 4 patients with non-union, 3 patients having wound infection and they need revision surgery. Mean follow up time was 4.5 months (2-7 months). 90% of the patients achieved radiological bony union at last follow up. The mean improvement in the AOFAS score was 73 and visual analogue score were 88 ± 5 .

Conclusion: Arthrodesis is an end stage procedure should be considered only after all conservative treatments fails. Tibiotalocalcaneal fusion with retrograde nailing and bone grafting is a successful salvage procedure in severe ankle and hindfoot arthrosis with deformity. Patient satisfaction rate is high, though infection is major problem and precautions should be taken to reduce its incidence.

Biography

Ashfaq Ahmed did his Bachelor in Medicine and Surgery at age of 22 years from Khyber Medical University, Pakistan. Then He did Master in Public Health From Sarhad University, Pakistan. After that he did FCPS in Orthopedics and Spine Surgery from College of Physicians and Surgeons, Pakistan. At 2018. Currently he is working as a Senior Registrar at Ghurki Hospital, Pakistan as well as Fellowship in Spine Surgery. He is also running Research Department at his own Hospital. He has attended multiple national as well as International Conferences and presented papers. He has published upto now 48 papers at National and International Papers. During his bachelor degree, He was awarded multiple Gold medals during his student life.