ISAKOS

International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine

10th Biennial ISAKOS Congress • June 7-11, 2015 • Lyon, France

Paper #76

Open versus Posterior Arthroscopic Subtalar Arthrodesis: A comparative Study in 127 Patients

Chamnanni Rungprai, MD, USA
Phinit Phisitkul, MD, USA
John E Femino, MD, USA
Charles L Saltzman, MD, USA
Annunziato Amendola, MD, USA

University of Iowa Hospital and Clinics
Iowa city, Iowa, USA

Summary:
Open and PASTA demonstrated significant improvements in pain and function as measured with the FFI, SF-36, and Angus and Cowell score at least one year post-operatively using validated outcome measurement. Posterior subtalar arthroscopic arthrodesis demonstrated lower nonunion rates, quicker return to activities and had fewer significant complications.

Abstract:
BACKGROUND
Open subtalar joint arthrodesis is a standard treatment for patients with subtalar joint arthritis after failure of nonsurgical treatment. Arthroscopic technique, especially through the posterior approach, has gained increasing popularity, with reports of high patient satisfaction, excellent fusion rate, and minimal post-operative morbidities. However, there is a lack of comparative research to demonstrate outcomes and complications between the two techniques.

MATERIAL & METHODS
Retrospective chart review was performed evaluating one hundred and twenty-seven consecutive patients (135 feet) who underwent subtalar joint arthrodesis using open (sixty three patients with 66 feet) and arthroscopic (sixty-four patients with 69 feet) techniques between 2001 and 2014. The primary outcome was Foot Function Index (FFI), Short Form-36 (SF-36) physical and mental component scores, Visual Analogue Scale, Angus and Cowell rating score. Secondary outcomes included coronal plane hind foot alignment, tourniquet time, the length of hospital stay, fusion rate, time to return to work, sports, and activity of daily living, and complications.

RESULT
Both groups demonstrated signi?cant improvement in the FFI, SF-36 (both physical and mental component scores), Angus and Cowell rating score, and Visual Analogue Scale. There was signi?cantly greater improvement in union rate, shorter union time, shorter hospital stay, lesser time to return to activities of daily living, lesser time to release to work, and lesser time to sports in the arthroscopic arthrodesis group ($p<0.05$ all). However, tourniquet time, Visual Analogue Scale, Angus and Cowell rating score, and coronal plane hindfoot alignment were similar between two groups. There were no statistically significant differences in union rate and time to union among the various sizes of screw and types of bone graft used in both open and PASTA groups. Sural nerve complications and painful surgical scar were more frequent in the open arthrodesis group while hardware symptoms were more frequent in arthroscopic group.

CONCLUSION
Open and arthroscopic subtalar arthrodesis both demonstrated signi?cant improvement in terms of pain and function as measured with the VAS, FFI, and SF-36. Posterior arthroscopic subtalar arthrodesis resulted in a higher union rate, shorter hospital stay, and less time to return to activities as well as lower overall complications rate.

ISAKOS

International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine

10th Biennial ISAKOS Congress • June 7-11, 2015 • Lyon, France

Paper #76

LEVEL OF EVIDENCE: Level III, Retrospective study

KEY WORD: Posterior Arthroscopic Subtalar Arthrodesis, Open Subtalar Arthrodesis, Comparative Study, Outcomes and Complications of Subtalar Fusion