

## **Conversion rate of isolated talo-calcaneal (subtalar) arthrodesis to triple fusion; a five year retrospective study**

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### **Background**

Talo-calcaneal (subtalar) arthrodesis is an established surgical treatment for advanced, isolated arthropathy. High rates of union, pain resolution and patient satisfaction have been reported in multiple series. An important advantage over traditional triple fusion is the preservation of motion at the transverse tarsal joint, but it is not clear how many patients subsequently require fusion of the talo-navicular and calcaneo-cuboidal joints.

### **Methods**

A single centre retrospective study was conducted of all isolated subtalar fusion procedures performed from Feb 2008 to June 2013. The primary outcome measure was re-operative triple fusion. Secondary outcome measures included resolution of pain, non union and further surgery including removal of metalware.

### **Results**

Twenty-one patients underwent 22 isolated subtalar fusion procedures with a mean post-operative study period of 72.4 months (s.d. 19.5) and out-patient follow up period of 45.0 months (s.d. 30.1). The causes of arthropathy included osteoarthritis, post-traumatic arthritis and deformity. Five feet (23%) required a subsequent conversion to triple fusion after an average of 18.2 months (s.d. 7.2, 8 to 28). Four patients had unresolved pain. Two patients required revision fusion for non-union. Four patients underwent removal of metalware.

### **Conclusions**

Isolated subtalar fusion improved pain while sparing the transverse tarsal joint in 59% of cases; 23% of cases ultimately required a triple fusion and 18% had unresolved pain.