A Case Report

Recurrent Dorsal Subluxation of the Fifth Metatarsal-Cuboid Joint Secondary to Trauma

*Irwin M. Siegel, MD**

ABSTRACT

A young woman presented with recurrent dorsal subluxation of the fifth metatarsal-cuboid joint secondary to trauma. The injury was treated by metatarsal-cuboid fusion without functional residual disability.

CASE REPORT

A 25-year-old woman with pain in the right foot reported injuring herself 3 months earlier while escaping a fire. While being rescued by a fireman, she placed her right foot on a fire-escape railing and her left foot on a ladder. She lost her balance and, while pulling herself back onto the ladder, placed severe eversion pressure on the right foot (Figure 1). She was taken to the emergency room of a local hospital, where she was examined and released. The next day she reported a painful "popping in and out" at the lateral aspect of her right foot whenever she put weight on it. This symptom continued intermittently until her visit to our clinic.

An examination of the foot revealed tenderness at the base of the fifth metatarsal and cuboid. Stress applied to the metatarsal-cuboid joint in a plantar-to-dorsal direction elicited a subtle, painful click. Levering the fifth metatarsal plantarward produced pain and a mild click. Standing on tiptoe and jumping were painful and produced clicking. Roentgenograms and computerized tomography scans were negative.

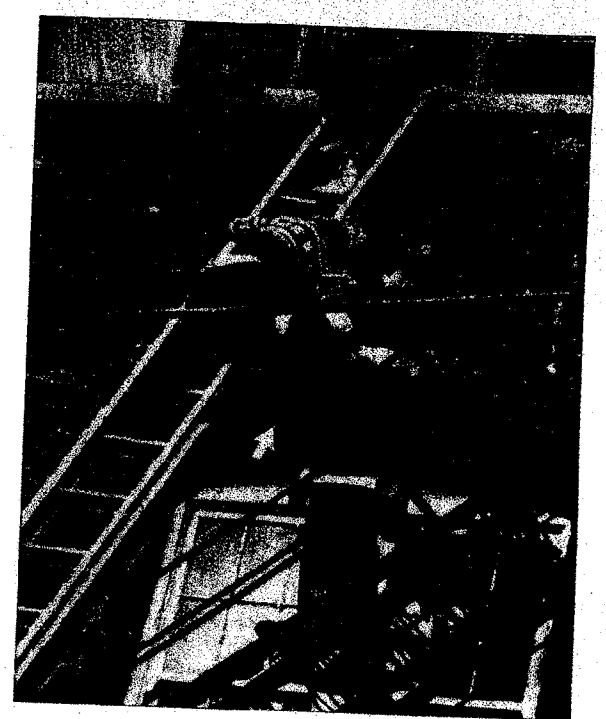

Figure 1. *Photo taken during fire-escape rescue. Note severe eversion of right foot, as indicated by the arrow.*

Dr Siegel is Associate Professor, Rush-Presbyterian-St. Luke's Medical Center, Departments of Neurological Sciences and Orthopaedic Surgery, Chicago, Illinois.

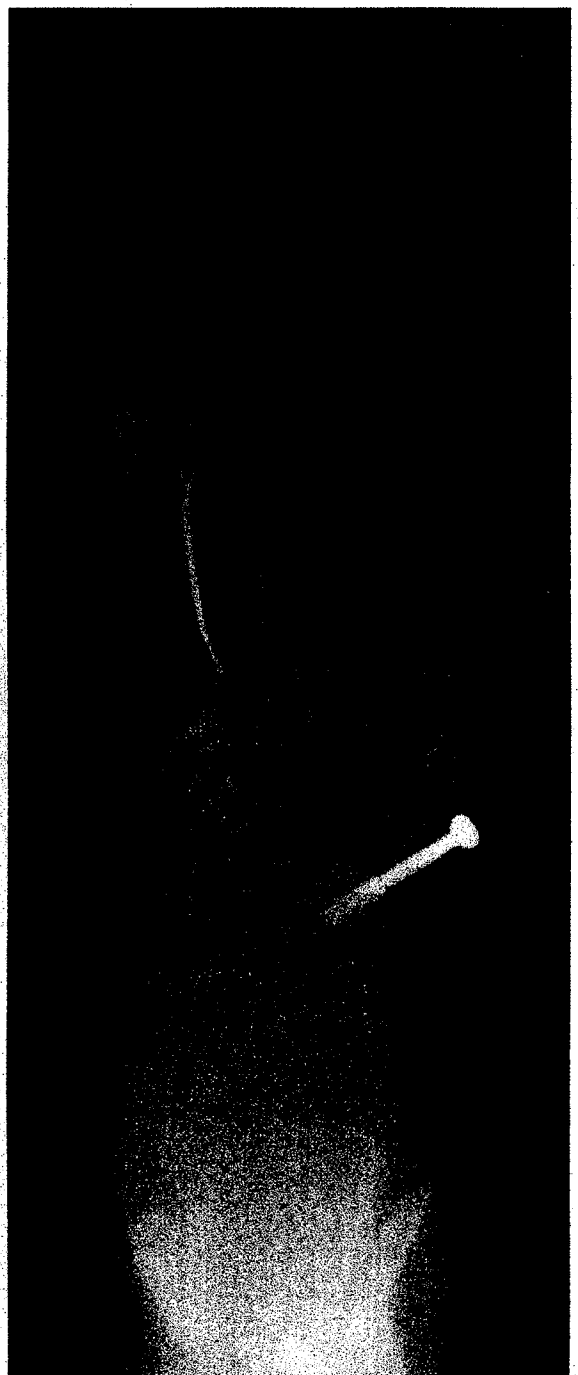

Figure 2. *Fusion of metatarsal-cuboid joint using cancellous iliac bone and single lag screw.*

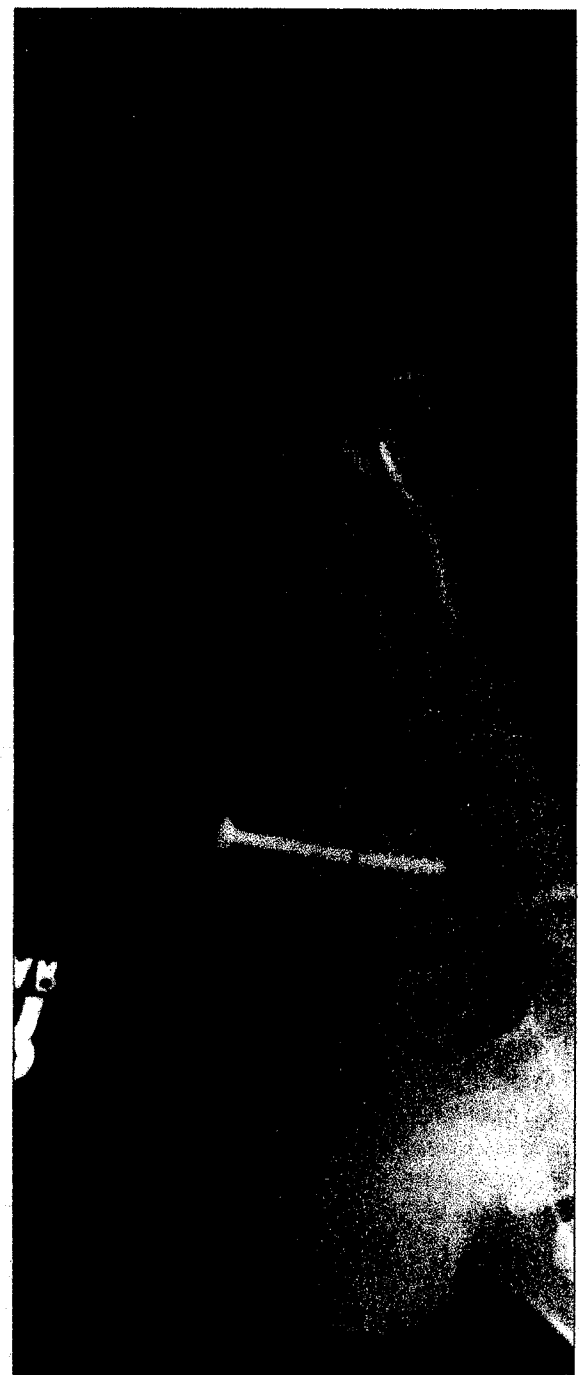

Figure 3. *Six months after surgery, fracture of screw at shaft-thread junction.*

She was instructed to rest and was treated with elastic support, crutches, and 3 weeks in a plaster cast. Because none of these treatments relieved her symptoms, fusion of the metatarsal-cuboid joint was performed using cancellous iliac bone and a single lag screw for fixation (Figure 2). After surgery, the foot was kept in a walking plaster cast for 8 weeks. Although the fusion procedure was successful, the lag screw fractured at the shaft-thread junction 6 months after surgery (Figure 3). She was asymptomatic with no significant findings, but because she experienced tenderness over the screw head when wearing a fitted shoe, the proximal portion of the screw was removed.

DISCUSSION

Proximal subluxation or dislocation of metatarsals is rare, but when it does occur, it is often accompanied by a fracture.[1] Low velocity longitudinal torque-rotational injuries may produce only minor radiographic changes, but soft-tissue damage can be severe. Capsules and ligaments can stretch and tear, and if treatment is inadequate, prolonged disability may result.[2] Major dislocations of the tarsometatarsal joint are easily diagnosed, but minor subluxations can be missed. Swelling and tenderness may be present, and manipulation can confirm instability. Arthrodesis of these minimal-motion articulations is the definitive treatment.

Recurrent subluxation of the fifth metatarsal-cuboid joint as described in this report did not respond to nonsurgical management but was treated without residual functional loss by metatarsal-cuboid fusion.

REFERENCES

1. Hardcastle PH, Reschauer R, Kutscha-Lissberg E, Schoffmann W. Injuries to the tarsometatarsal joint: incidence, classification, and treatment. *J Bone Jt Surg.* 1982;64B:349–356.
2. Myerson M. Tarsometatarsal joint injury. *Physician Sports Med.* 1993;24(2):97–107.