CHAPTER 5

TECHNIQUE FOR TAILOR'S BUNIONECTOMY

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Many different techniques have been proposed for treatment for surgical correction of the tailor's bunion deformity. A variety of different osteotomy techniques have been utilized, as well as many different forms of internal fixation, in an attempt to produce a quality and standard surgical procedure for this common deformity.

The most recent technique utilized has provided consistent and predictable results. The technique involves a classic closing wedge osteotomy at the neck of the metatarsal using a horizontal loop of cerclage wire. This technique will be detailed in the following figures.

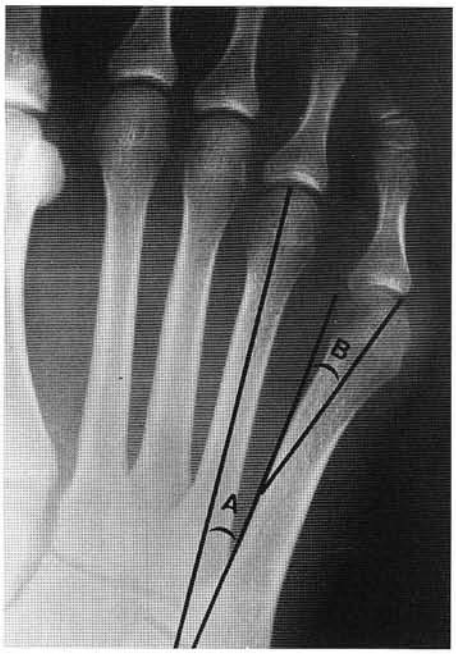

Figure 1. The common deformity of tailor's bunion has been a unique challenge in modern foot surgery. A wide variety of procedures have been utilized over the years for the treatment of this deformity. Techniques have ranged from simple condylectomy to metatarsal head resection and a wide variety of osteotomy and fixation techniques in between. While there has been much written about the evaluation of this deformity and theoretical guidelines for choice of procedures offered, the majority of common techniques for the correction of the tailor's bunion include some type of distal osteotomy of the fifth metatarsal.

Figure 2A. The fifth metatarsal has been attacked by a wide variety of the novel osteotomies and fixations. Here the once popular distal oblique osteotomy is fixated with an intramedullary pin which was designed to compress the osteotomy by introducing a bending force of the pin to the osteotomy.

Figure 2B. Unfortunately, while the osteotomy was unique and novel in design, it also proved to be relatively unstable. Once the lateral cortical hinge fractured, problems of shortening, delayed union and non-union were encountered.

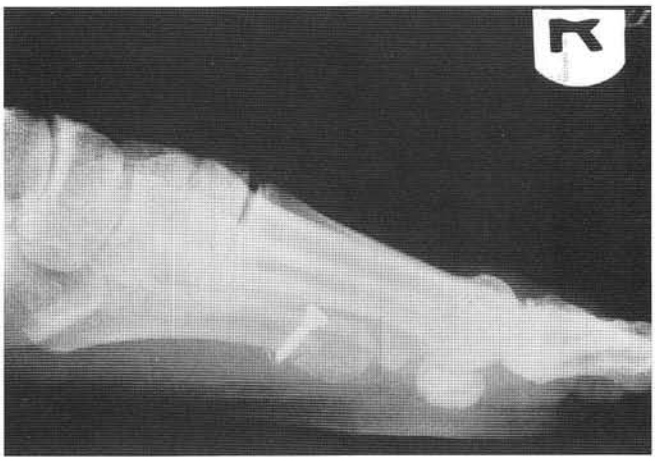

Figure 3A. Many skilled surgeons attempted to use small cortical screws for fixation of familiar long oblique Austin-type osteotomies.

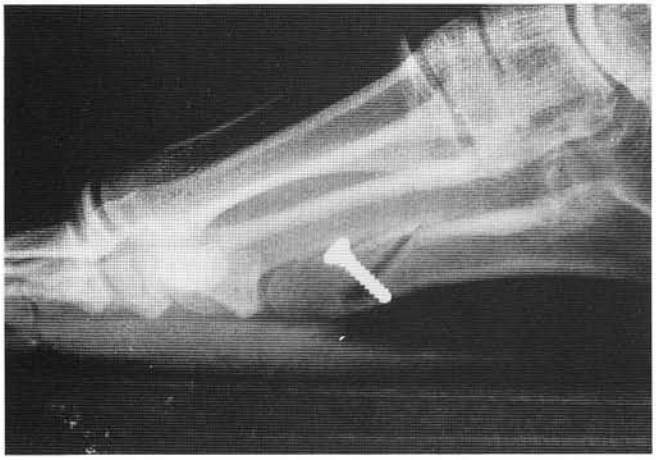

Figure 3B. Even these advanced fixation techniques fell short when these fragile osteotomies were subjected to weight bearing. Regardless of the osteotomy design or type of fixation, the distal osteotomy of the fifth metatarsal still must be protected from excessive weight bearing and ultimate displacement. Surgeons continue to look for a consistent and reproducible osteotomy and fixation for the correction of the tailor's bunion.

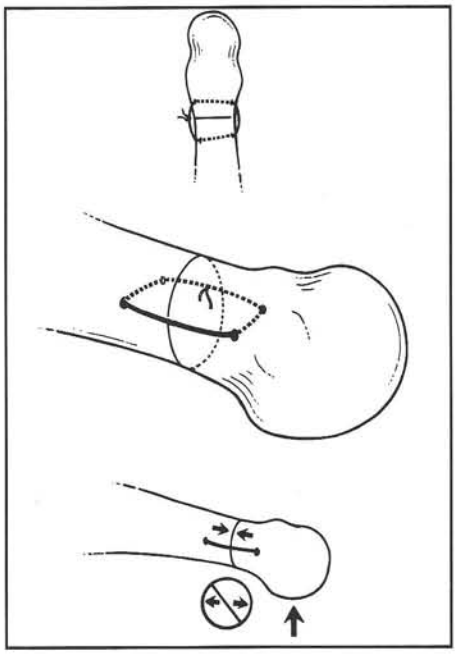

Figure 4A. A technique which has been employed in the last several years, combines the stability of a transverse osteotomy, and the use of a horizonal intraosseous loop of twisted 28-gauge monofilament wire. The physical placement of the wire loop protects the plantar cortex from gaping as the metatarsal is loaded. In this mechanical configuration, the wire loop is acting as a tension band wire. It resists gaping of the plantar cortex and converts the loading force to compression of the dorsal cortex.

Figure 4B. A dorsoplantar radiograph depicts the horizontal intraosseous loop fixating the distal transverse osteotomy of the fifth metatarsal.

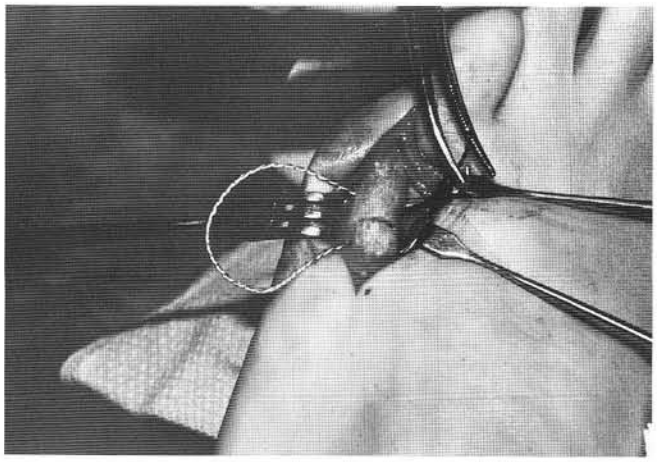

Figure 5. A transverse wedge osteotomy has been performed in the neck of the fifth metatarsal, leaving the lateral cortex intact. Care must be taken when resecting the lateral condyle of the metatarsal head to allow the distal hole of the fixation technique to exist in cortical bone. A twisted 28-gauge monofilament wire is passed from lateral to medial through the distal drill hole initially, and then the other end of the wire is passed from lateral to medial through the proximal hole.

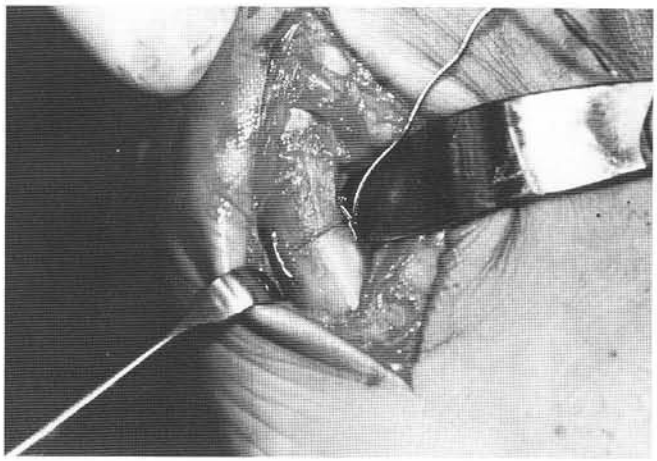

Figure 6. The wire is pulled tight protecting the lateral cortex and then twisted on itself to create compression and a closing force at the medial aspect of the osteotomy.

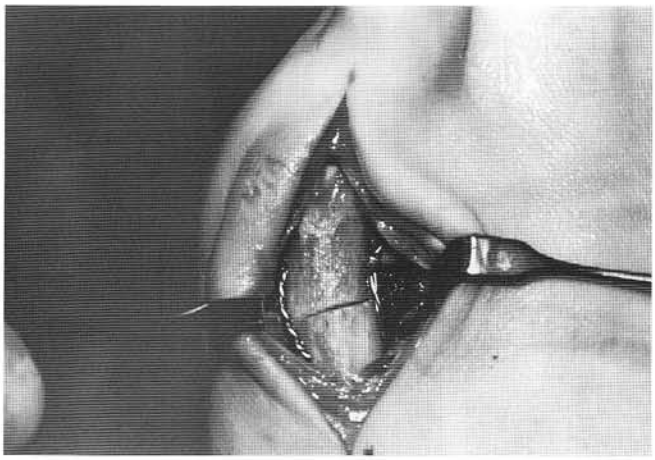

Figure 7. The wire is then cut and laid against the medial cortex of the bone.

Figure 8. A postoperative dorsoplantar radiograph depicts the distal osteotomy and horizontal wire loop fixation.

Figure 9A. A typical tailor's bunion deformity with prominent lateral condyle and clinical prominence over the head of the fifth metatarsal.

Figure 9B. Angulation of the fifth metatarsal head following distal osteotomy and intraosseous fixation.

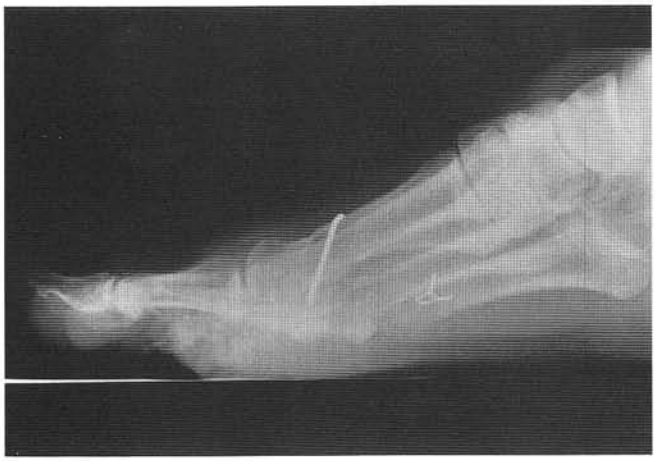

Figure 9C. A lateral radiograph demonstrating the intraosseous wire loop fixation and maintenance of the plantar grade alignment of the entire fifth metatarsal. There is no obvious dorsiflexion of the fifth metatarsal head at the osteotomy site. There is no evidence of displacement or callus formation.

Figure 10A. A more severe tailor's bunion deformity with splay of the fifth metatarsal and a sharp lateral condyle.

Figure 10B. Medial angulation of the fifth metatarsal and evidence of callus formation at the osteotomy site. The surgical alignment however, is maintained.

Figure 10C. The lateral radiograph additionally demonstrates mild callus formation. However, the effect of the intraosseous loop appears to maintain the position and alignment of the fifth metatarsal head.

Postoperative management usually employs some type of off-loading of the fifth metatarsal. This may include a half inch cut-out insole in the surgical shoe or walking brace. Radiographs are taken intermittently during the postoperative course to identify any early sign of shift or displacement. Should gross instability or shift of the osteotomy be identified, the patient is protected by non-weight bearing until satisfactory healing of the metatarsal occurs.

The author will continue to monitor this specific osteotomy technique and intraosseous wire loop fixation. The author has utilized the technique for over five years and finds that he is able to satisfactorily protect and control most fifth metatarsal osteotomies.