

Weil Osteotomy Tips & Pearls

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INTRODUCTION

The Weil osteotomy has become a popular technique for the surgical treatment of resistant lesser metatarsalgia. There is a considerable body of literature attesting to both the effectiveness and complications of this osteotomy. To date, over 25 different lesser metatarsal osteotomies have been described. Lowell Scott Weil, Sr. was the first to describe an osteotomy of the metatarsal neck, parallel to the weight-bearing surface. This allowed the metatarsal head to slide proximally, thus providing axial decompression. In 1992, Weil first performed this procedure in Europe. The osteotomy quickly gained momentum in Europe where it was primarily utilized for surgical correction of severe deformities associated with metatarsophalangeal contracture due to excessive metatarsal length. Some of these deformities had been previously treated by joint destructive procedures such as a pan metatarsal head resection.

The Weil osteotomy has gained popularity in North America based upon the simple technique, stable fixation, excellent union rates, and predictable results. The Weil osteotomy is generally indicated for recalcitrant metatarsalgia, which is refractory to conservative care. Long metatarsals with or without transverse plane digital deformities, crossover toes, and subluxations/dislocations

of the metatarsophalangeal joints are all specific indications for this procedure. It has also been utilized to correct rheumatoid deformities at the metatarsophalangeal joint. The Weil osteotomy may be employed on 1 or more metatarsals based on the complexity of the forefoot deformities and overall length pattern of the adjacent metatarsals.

TECHNIQUE

The metatarsophalangeal joint is dissected in the usual fashion. Once the metatarsal head is exposed, a 0.062 or 0.054 Kirschner wire is driven only several millimeters into the central metatarsal head. Care is taken not to drive the Kirschner wire to the level of the osteotomy site (Figure 1). The osteotomy is then cut in the usual fashion (Figure 2).

Once completed, the Kirschner wire is then used as a joystick to position the osteotomy in the determined alignment. This allows uniform movement of the osteotomy and prevents rotation while the fixation is applied (Figure 3). The author typically uses 2 points of fixation to prevent rotational movement (Figure 4).

This is a simple technique, which allows easy movement of the Weil osteotomy. Unwanted rotation is prevented during the application of fixation.

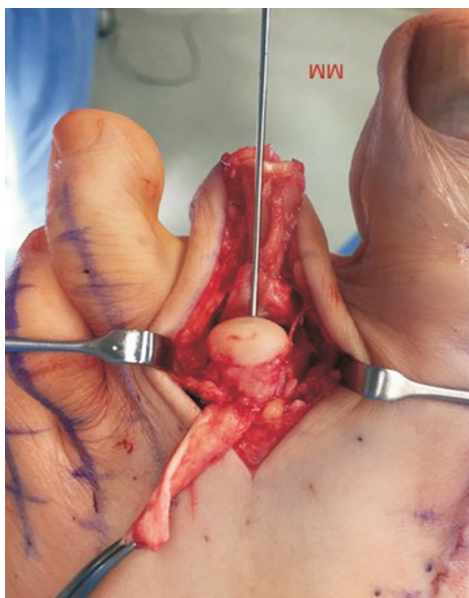


Figure 1. The Kirschner wire is driven into the metatarsal head.

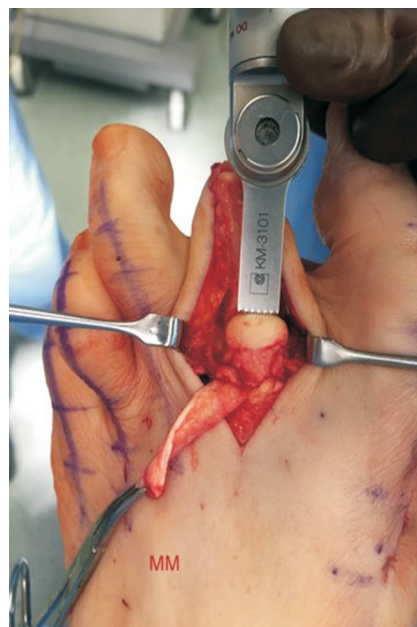


Figure 2. The osteotomy.



Figure 3. The osteotomy is positioned.



Figure 4. Two points of fixation are used.