The Merete Ludloff Osteotomy Plate For Hallux Valgus Repair

INTRODUCTION:

Bunions are probably the most common deformity seen in the adult foot. The term “bunion” is actually Latin for turnip. The scientific phrase used to describe a bunion is hallux valgus. Hallux is Latin for great toe, while valgus means deviation towards the outer side of the body.

Bunions come in all shapes and sizes. This causes significant variation in symptoms and also in the extent of the surgery required to correct a bunion. Most patients who have symptomatic bunions complain of pain on the medial, or inner aspect of the big toe. However, bunions may also cause pain underneath the big toe, or even under the second toe.

When an x-ray of a bunion is taken, there is usually angulation between the first metatarsal bone and the bones of the big toe. There may also be angulation between the first and second metatarsal bones. These angular irregularities are the essence of most bunions. In general, surgery for bunions aims to correct such angular deformities.

For more advanced bunions, it is often necessary to perform an osteotomy of the base of the first metatarsal bone. This allows for greater correction of the underlying angular deformity. The cut bone is rotated and then held together with two or three screws. At the same time, the distal end of the first metatarsal is shaved and the soft tissue tightened. This is a more extensive procedure and sometime requires the use of crutches and protective weight bearing for six weeks after surgery. Example of one such first metatarsal osteotomy is called the Ludloff osteotomy.

Dr. Ludloff was an orthopedic surgeon who developed a osteotomy procedure for the first metatarsal ray. Merete developed a plating system to accommodate this procedure developed in collaboration with Steven K. Neufeld, M.D., Orthopedic Foot and Ankle Center of Washington, DC.

The Ludloff proximal first metatarsal osteotomy is indicated for the surgical correction of moderate-to-severe Hallux Valgus deformity associated with metatarsus primus varus. Merete has identified a neat little niche for orthopedic F&A guys. Most podiatrists are not familiar with this development but the good one are aware of it. You can assist them with just a few pointers from the info I am providing you with.

LUDLOFF TODAY:

Recently orthopedic foot and ankle surgeons have been evaluating the Ludloff procedure very favorably. Results demonstrate that the procedure achieves significant correction of moderate-to-severe Hallux Valgus deformity, significant reduction in forefoot pain, and significant improvement in functional outcome.

Here is what makes this plating system worthy of our attention and sales strategy especially among orthopedic foot and ankle surgeons. The new Merete Ludloff plate allows the surgeon to obtain RIGID LOW PROFILE fixation for Hallux Valgus correction using the familiar Ludloff osteotomy technique. Previous fixation with only two screws can be inadequate and required non-weight bearing post op care. With the Merete Ludloff Plate you achieve rigid stable fixation immediately.

In 2009 the Journal of bone and joint surgery. American volume ISSN 0021-9355 CODEN JBJS A3, vol. 91A, pp. 156-168, SUP2-PART1 [13 page(s) (article)] (10 ref.), a very positive result on 111 feet was reported to further substantiate this procedure.
The mean American Orthopaedic Foot and Ankle Society score improved significantly \((p < 0.0001)\) from 53 points preoperatively to 88 points at the time of the most recent follow-up. The mean American Orthopaedic Foot and Ankle Society score for patients who were sixty years of age or less was significantly higher than that for patients who were more than sixty years of age (91 compared with 83 points; \(p = 0.0057\)). The mean hallux valgus angle decreased significantly from 35° preoperatively to 9° at the time of the most recent follow-up \((p < 0.0001)\), and the mean intermetatarsal angle decreased significantly from 17° to 8° \((p < 0.0001)\). All osteotomy sites united without dorsiflexion malunion but with a mean first metatarsal shortening of 2.2 mm.

CONCLUSIONS:

To our knowledge, the present report describes the largest cohort of patients undergoing a modified Ludloff osteotomy for the correction of hallux valgus deformity that has been reported in the literature. Our intermediate-term results demonstrate that the procedure achieves significant correction of moderate-to-severe hallux valgus deformity, significant reduction in forefoot pain, and significant improvement in functional outcome. Patients with an age of sixty years or less appear to have a more favorable outcome.

In the 1997 American College of Foot and Ankle Surgeons, published by Elsevier Ltd. on behalf of the American College of Foot and Ankle Surgeons, Amol Sexena DPM and Derek McCammon DPM published a paper named, 'The Ludloff osteotomy: A critical analysis'. It was published in The Journal of Foot and Ankle Surgery Volume 36 Issue 2 April-March 1997 pgs. 100-105.

In it, fourteen Ludloff (oblique shafi) osteotomies were performed to reduce the first intermetatarsal angle on 12 female patients whose average age was 47 years. Average reduction of the first intermetatarsal angle was 6.5° (postoperative average, 9.4°). Average Hallux Abductus angle reduction was 16.7° (postoperative average, 13.4°). These reductions were statistically significant \((P \leq 0.05)\). Average first metatarsal shortening was 1.4 mm. No transfer lesions nor lesser metatarsal stress fractures were noted. One patient (a 30+ pack/year smoker) sustained a delayed union. The average American Orthopedic Foot and Ankle rating score was 92.3 out of 100. Average follow-up was 48 months. They concluded that this procedure is a viable alternative to closing base wedge osteotomies.

(See [http://www.straws.com/a_ludlof.htm](http://www.straws.com/a_ludlof.htm)


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