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Traumatic Hallux Varus Deformity Repair: A Case Report

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Background

Hallux Varus, One of the most common forefoot deformity seen in around 30-36% of the population. We observe here for symptoms of the medial edge of the foot, the sole and the small toes. Conservative management may not increase the symptoms, but it may also not correct the deformity of the great toe. Surgery is mainly indicated if pain continuously persists. Proper operative techniques must be selected from a wide variety of available procedures.

Keywords

Hallux Varus, Scarf Osteotomy, Akin Procedure

Case Report

Case Report We reported here a 55-year-old female who presented with a 5 year history of deformity of right great toe that occurred after a trauma. Her deformity progressed throughout the years causing severe pain on weight bearing activity. Clinically she has hallux varus deformity which is severe on her right foot. In view of severity of deformity and persistent pain despite receiving analgesic and splinting. She was planned for surgical correction. Post-surgical correction she shows improvement both in clinical and radiological parameters with no immediate complication observed. And now has completely improved and has been pain free since.

Results

The Patient has achieved complete pain relief with no observed side effects The patient was allowed immediate full weight bearing postoperatively in a flat rigid shoe for 6 weeks. Radiographically and clinically patient showed improvement and were no further symptoms, all unions were achieved finally. Minimally invasive surgery including percutaneous distal metatarsal osteotomy and plating effectively corrected severe hallux varus with severe metatarsus adduct us radiologically and clinically.


BEFORE


LEFT
RIGHT

Discussion

Congenital hallux varus is uncommon (1), whereby the great toe is medially angled at the metatarsophalangeal joint from a few degrees to as important as 90 °. This defect is characterized by supination, medial deflection, and clawing of the big toe, and also enlarged first web space

(1). The etiology of natural hallux varus includes medial pitch to the first metatarsocuneiform joints, medium cord thickening, docked block first metatarsals, first metatarsal longitudinal epiphyseal type (LEB; delta phalanx), redundant metatarsals enwrapping within the first web spaces, and ineffective abductor hallucis and adductor halluces insertions (2). Morrissy et.al. described the criteria to be assessed during the correction of hallux varus disfigurement metatarsal-phalangeal contradiction correction, correction of the soft towel tethered on the medium side of the hallux and enlarged first web space, metatarsal or type epiphyseal disfigurement correction if present, and correction of polydactyly if also present (3). Of numerous ways this can be divided into soft towel procedure, bony procedure, or a combination of both soft apkins with the bony procedure. The most common soft towel procedures described in the literature are by Mc Elvenny and Farmer. Mc Elvenny proposed the junking of appurtenant bones, medium sesamoidectomy, and capsulotomy, medium stringy band release, and side capsule underpinning followed by spitting of the metatarsophalangeal joint with a K-line (4). Farmer described rotational delirium and skin delirium and syndactylization involving the first and alternate toe (5). Besides these two well- established ways, there are many other procedures reported similar as the entire abductor hallucis muscle and tendon resection, abductor hallucis tendon tenotomy, osteotomy of the metatarsal, and arthrodesis (6). First metatarsal or proximal phalanx osteotomy was more generally performed and the result was promising (7). An osteotomy with side ending or medium open wedge of the first metatarsal or proximal phalanx plays an important part in the surgery of the natural hallux varus. It can reduce varus angulation and beget relief of pain. Correction with bone grafting after the osteotomy is performed in case of short first metatarsal (8). Shim etal. demonstrated that a combination of osteotomy with soft towel procedure would be a good choice of treatment in the case of natural hallux varus. They plant out that after the soft towel procedure, the first web space widening could still live, and thus, an osteotomy can be performed in order to correct any residual disfigurement (8).

In our case, the case had contracted abductor hallucis with tight flexor hallucis longus and extensor hallucis longus that lead to divagation of the big toe medially at the metatarsophalangeal joint. we decided to perform a side close osteotomy of the proximal phalanx and metatarsophalangeal common transfixion with anti-rotation screw and plating.

Conclusion

Hallux varus is most often an asymptomatic disease. Treatment is aimed at reducing pain and irritation at medial prominence.Treatment option depend on the symptoms and severity of the disease. Numerous surgical procedures have been described with good outcome. This surgical procedure is reserved for those who failed conservative treatment, and aimed to correct deformity, and to elevates the symptoms.

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