

Hallux Flexus: Sequela of Residual Clubfoot

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Abstract

A dorsal bunion, also known as hallux flexus, is a deformity where the 1st metatarsal is in a dorsiflexed position and the proximal phalanx of the hallux is in a plantarflexed position usually articulating with the plantar aspect of the 1st metatarsal head. Multiple etiologies exist for this condition; the one most evaluated has been the occurrence of hallux flexus following clubfoot surgery. The following is a case report on a patient that is skeletally mature and developed hallux flexus following soft tissue correction of a clubfoot. This deformity was surgically corrected with an arthrodesis of the 1st metatarsal phalangeal joint (MTPJ). The patient was followed for 3 years following surgery and has returned to all activities. This case report illustrates that an arthrodesis of the 1st MTPJ can be performed as a corrective procedure of hallux flexus.

Keywords: Dorsal bunion; Clubfoot; Deformity; Hallux flexus

Introduction

A dorsal bunion, or hallux flexus, is a deformity where the 1st metatarsal is in a plantarflexed position and the proximal phalanx of the hallux is in a dorsiflexed position usually articulating with the plantar aspect of the 1st metatarsal head. There are a variety of etiologies for this condition; the one most evaluated has been the occurrence of a dorsal bunion following clubfoot surgery [1-14]. Docquier noted an incidence of 16% of dorsal bunions in his series, while Kuo noted only 4.4% in his series [6,9]. This deformity is evaluated by physical exam including muscle strength, reducibility of the deformity and radiographic evaluation. Treatment options for a dorsal bunion vary from conservative to arthrodesis [15].



Figure 2 Weight bearing lateral radiograph of the m foot.



Figure 3 Lateral view of the medial foot at 4-week postoperative visit.

Besse discusses treatment of dorsal bunions in adulthood and advises tendon transfer and/or fusion as these patients complain of osteoarthritis, pain, and turgor [2]. Besse states that arthrodesis is needed for severe deformities, for mild deformity tendon transfers and osteotomies are recommended [2]. The discussion concerning surgery was to perform a Lapidus versus a metatarsal phalangeal joint arthrodesis or combine the two procedures. An intraoperative decision was made against combining a Lapidus procedure and the 1st MTPJ arthrodesis as adequate reduction of the 1st metatarsal was achieved with an isolated 1st MTPJ arthrodesis. We postulate that a 1st MTPJ arthrodesis in these types of cases works well to reduce the elevation of the 1st metatarsal in a similar fashion that a 1st MTPJ arthrodesis works well to reduce an intermetatarsal 1-2 angle.