

TAILOR'S BUNION

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A tailor's bunion is a pathologic enlargement of the lateral fifth metatarsophalangeal joint. The resulting abnormal protrusion of soft tissue and bone can result in a painful condition, ranging from mild discomfort to severe pain. The soft tissue lesion can be present either laterally, plantar, or dorsolaterally. Other symptoms include hyperkeratotic lesions as well as a painful bursa in this area. This often causes the patient to have difficulty in finding comfortable shoes.

ETIOLOGY

The literature describes many different etiologies of the tailor's bunion deformity. Most of these fall into one of two categories, either structural or functional. Davies¹, in 1949, published the first paper on tailor's bunion in which he stated that the pathology is caused by an embryonic splaying of the fifth metatarsal due to incomplete or imperfect development of the transverse metatarsal ligament. Other authors believe that chronic irritation from poorly-fitted shoes is a cause of a symptomatic tailor's bunion. It has been observed that in most cases, a tailor's bunion occurs in patients with a splay foot, flat foot, or a foot type in which there is a true outward deviation of the fifth metatarsal.

Lelievre² discussed three possible mechanisms underlining the formation of a tailor's bunion: a supernumerary bone attached to the lateral side of the fourth metatarsal that may exert an abductory force on the fifth metatarsal; spreading of the metatarsals resulting in a wide intermetatarsal angle (splay foot); or pressure on the lateral side of the fifth metatarsal caused by sitting cross-legged. DuVries³ believed that a tailor's bunion could be the result of one or more of the following combinations: hypertrophy of the soft tissue overlying the fifth metatarsophalangeal joint; congenitally wide dumbbell-shaped fifth metatarsal head; or a lateral bending of the fifth metatarsal head. There have been other etiologies described in the literature that

can cause a tailor's bunion, such as an adducted fifth digit, lateral bowing of the fifth metatarsal, as well as subluxatory pronation of the fifth ray associated with subtalar or midtarsal joint pronation.

Leach and Igou⁴ described prominent lateral condyles of the fifth metatarsal head, as well as an angular deviation between the fourth and fifth metatarsals, as a cause of a tailor's bunion. Structural abnormalities could also be responsible for a tailor's bunion, including hypertrophy of the plantar condyles, a short fourth metatarsal, or a prominent inferior sesamoid bone. Biomechanics also play a role in development of the tailor's bunion. Root⁵ thought that the tailor's bunion was a result of abnormal subtalar joint pronation, uncompensated varus position of the forefoot and rearfoot in a fully pronated foot, congenital plantarflexed fifth ray, or a congenital dorsiflexed fifth ray. Root also thought that the tailor's bunion was an idiopathic condition possibly caused by the absence of the transverse head of the adductor hallucis muscle inserting into the fifth metatarsophalangeal joint.

Any biomechanical condition that results in rearfoot instability will affect forefoot stability and the fifth ray. Trepal⁶ points out that other causes such as neoplasm, or a malunited fracture or osteotomy can result in an abnormal osseous prominence in this area, leading to symptoms similar to a tailor's bunion. Lastly, neurologic disorders or systemic diseases can cause muscular imbalances resulting in subluxation of the metatarsophalangeal joint, with resultant contracture at the fifth metatarsophalangeal joint.

CLINICAL EVALUATION

Typical complaints by a patient with a symptomatic tailor's bunion include throbbing, cramping, or piercing pain over the dorsolateral aspect of the fifth metatarsal head. The pain can also be located dorsally or plantarly in relation to the fifth metatarsal head. Shoes often aggravate the condition, particularly

those with a closed toe box. This condition is seen more frequently in women and may be related to certain styles of women's shoes. Localized erythema and edema can be present, and symptoms are often improved by walking barefoot or wearing open-toed shoes or sandals.

Plantar lesions beneath the metatarsal head may present as a diffuse tyloma or an intractable plantar keratosis. Another condition associated with a tailor's bunion is an adductovarus fifth digit with an associated heloma durum over the proximal interphalangeal joint.

RADIOGRAPHIC EVALUATION

Fallat and Buckholz⁷ defined radiographic measurements to analyze and classify tailor's bunion deformities. They described both an intermetatarsal angle and a lateral deviation angle which help to identify the level of deformity.

A third radiographic parameter, described by Catanzariti⁸, is called the sagittal deviation angle of the fifth metatarsal. This parameter is helpful for evaluation of dorsal displacement of the capital fragment, particularly as related to postoperative osteotomies.

CONSERVATIVE TREATMENT

Conservative treatment can be effective in relieving certain symptoms of a tailor's bunion. A shoe with a wider toe box is often helpful, as well as periodic debridement and accommodative padding and strapping of the area. When inflammation is present, ice, ultrasound therapy, nonsteroidal anti-inflammatory agents, and steroid injections may be helpful.

SURGICAL TREATMENT

There are numerous surgical procedures available for the treatment of a tailor's bunion. The first distal transposition osteotomy for the treatment of a tailor's bunion was described by Hohmann⁹ in 1951. Other authors have advocated step-down osteotomies or oblique distal osteotomies, with or without internal fixation. Yu¹⁰ described an oblique closing wedge osteotomy of the metatarsal neck fixated with an intermedullary K-wire. Many authors described surgical procedures without the use of internal fixation. There have been numerous

follow-up studies, particularly by Keating¹¹ et al., who reported a significant occurrence of secondary transfer lesions, as well as other complications resulting from non-fixated osteotomies. Many other procedures for the correction of tailor's bunions, with or without the use of internal fixation, have been described in the literature. At the Pennsylvania College of Podiatric Medicine, the authors are currently performing a retrospective review of fifth metatarsal osteotomies. This study will determine the importance of osteotomy fixation in achieving successful union and maintained correction.

SUMMARY

The clinical and radiographic evaluation of the tailor's bunion has been presented. Conservative therapy as well as the various criteria for surgical correction have been discussed.

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