

ENTITLEMENT ELIGIBILITY GUIDELINES

HALLUX VALGUS

MPC 01326
ICD-9 735.0 (acquired); 755.6 (congenital)

DEFINITION

Hallux valgus is a disorder of the foot in which the hallux or great toe is deflected laterally towards the other or lesser toes, often causing a bony prominence to develop over the medial aspect of the metatarsal head and neck.

DIAGNOSTIC STANDARD

A diagnosis from a qualified medical practitioner is required. X-rays are often helpful.

ANATOMY AND PHYSIOLOGY

Hallux valgus is a disorder in which a prominent eminence (bunion) is present on the medial aspect of the first metatarsal head with lateral deviation of the proximal phalanx. Accompanying the disorder, there is frequently medial deviation of the first metatarsal, subluxation of the sesamoids, and pronation of the great toe.

The key to understanding hallux valgus is to appreciate that there are both static and dynamic deformities occurring simultaneously in a given person.

Stability of the first metatarsophalangeal (MTP) joint is maintained by a combination of static and dynamic stabilizers. The strong capsuloligamentous sling of the first MTP joint and the bony shape of the first MTP and metatarsocunieiform (MTC) joints form the key static stabilizers, providing a good compromise between stability and suitability for weight transfer on one hand and motion on the other. Medial and lateral stability of the first MTP joint is provided by the collateral ligaments, located from the metatarsal head to the proximal phalangeal base. Also contributing to stability are the sesamoid ligaments, which connect the metatarsal head to the sesamoids, and the hood ligament, which stabilizes the extensor tendons dorsally. Plantarly, the sesamoids, which are located in the split tendon of the flexor hallucis brevis, are stabilized by the bony configuration of their articulation with the undersurface of the metatarsal head and

by the sesamoidal ligament, the plantar plate, and the transverse metatarsal ligament.

Further medial and lateral stability is thought to be provided by the shape of the opposing MTP joint surfaces, with flat surfaces being more inherently stable than round surfaces. Dynamic stabilizers include the abductor hallucis, whose tendinous insertion blends with the medial slip of the flexor hallucis brevis to insert medially on the proximal phalangeal base, and the two heads of the adductor hallucis (transverse and oblique) whose tendinous insertions blend with the lateral slip of the flexor hallucis brevis to insert on the lateral proximal phalangeal base as the conjoined tendon.

In the hallux valgus deformity, there is a disruption of the intricate balance previously described. The metatarsal head migrates medially, resulting in metatarsus primus varus, while the proximal phalanx becomes laterally deviated and eventually displaced. The medial capsule and supporting structures become attenuated, and the lateral structures contract. With progressive deformity, the sesamoids may become laterally positioned relative to the first metatarsal head, since they remain attached to the second metatarsal through the intermetatarsal ligament. The sesamoids typically remain with the proximal phalanx and may flatten the crista as they subluxate lateral to the medially displaced metatarsal head. The hallux may become pronated, with the abductor hallucis coming to lie in a more plantar position, where it is less effective in preventing further lateral deviation of the proximal phalanx. The laterally deviated proximal phalanx may push the metatarsal head medially, further accentuating the deformity.

The etiology of hallux Valgus may be multifactorial, and in certain cases related to such inherited tendencies as hypermobile joints, e.g. Ehlers - Danlos disease, splaying of the forefoot, and metatarsus primus varus. Hallux valgus occurs in more members of the family than would be affected by chance and, thus, may sometimes be considered familial in origin.

CLINICAL FEATURES

There may be a significant deformity of the first MTP joint, producing a rather large, obvious bunion. The main complaint may be the dislocated second toe that is sitting on top of the great toe, or the large callus beneath the second metatarsal head as a result of a transfer lesion due to instability of the first MTP joint.

Frequently, the condition is asymptomatic even in the presence of the deformity.

PENSION CONSIDERATIONS

A. CAUSES AND/OR AGGRAVATION

THE TIMELINES CITED BELOW ARE NOT BINDING. EACH CASE SHOULD BE ADJUDICATED ON THE EVIDENCE PROVIDED AND ITS OWN MERITS.

1. Congenital factors prior to clinical onset or aggravation

Congenital hallux valgus means a deformity of the foot present at or soon after birth.

2. Structural and traumatic factors that exist prior to clinical onset or aggravation

These include, but are not limited, to the following:

- contracture of Achilles tendon, i.e. equinus deformity;
- severe pes planus, i.e. the displacing effect of pes planus has the consequence of drawing the big toe laterally;
- amputation of the second toe or the second metatarsal head of the affected foot;
- a neuromuscular disease leading to foot deformity, e.g. polio.

3. Osteoarthrosis / osteoarthritis of the first MTP joint of the affected foot prior to clinical onset or aggravation

4. Narrow or confining footwear with increased heel height that causes lateral pressure on the great toe of the affected foot for a period of several years prior to clinical onset and for a lesser prior to aggravation

Confining toe boxes and increased heel height have been implicated in hallux valgus. Persons with hypermobility of the first metatarsocuneiform (MTC) joint and other conditions may predispose to the deforming forces of footwear.

5. Metatarsus primus varus prior to clinical onset or aggravation

There is controversy as to whether metatarsus primus varus is the cause or result of hallux valgus. Metatarsus primus varus is the medial deviation of the 1st metatarsal. This results in a widening of the gap between the first and second metatarsals. This condition is usually congenital.

6. Inability to obtain appropriate clinical management

B. MEDICAL CONDITIONS WHICH ARE TO BE INCLUDED IN ENTITLEMENT/ASSESSMENT

- Osteoarthritis of 1st metatarsal-phalangeal joint
- Subluxation of 1st metatarsal-phalangeal joint
- Hallux rigidus

C. COMMON MEDICAL CONDITIONS WHICH MAY RESULT IN WHOLE OR IN PART FROM HALLUX VALGUS AND/OR ITS TREATMENT

- Hammer toe of the second toe
- Overriding and/or underriding of the second toe

REFERENCES FOR HALLUX VALGUS

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