Structural or Positional Hallux Abductus?

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The podiatric surgeon must consider both the functional and cosmetic results of the hallux abductus surgical procedure he chooses. When the deformity is structural, there is congruity in the metatarsophalangeal joint, the articular surfaces are parallel and joint function is not disrupted; an osteotomy is performed to reduce the increased articular set angle(s). When hallux abductus is positional, the metatarsophalangeal joint does not display congruity and often motion is limited at the joint; capsular correction is used to reduce the subluxation or deviation of the first metatarsophalangeal joint.

When treating hallux abductus surgically, one is faced with the dilemma of choosing the procedure that would yield the best results both functionally and cosmetically. Too often, the podiatric surgeon falls into the "rut" of doing the "standard procedure." The purpose of this paper is to present some criteria for evaluating hallux abductus and surgical procedures utilized to correct the deformity on the basis of these criteria.

Hallux abductus literally means a transverse plane deviation of the hallux in relation to the first metatarsal in a direction away from the midline of the body. The nature of the deformity may be structural or positional.

Hallux abductus exists in the normal foot and is structural in nature. The long axis of the first metatarsal does not align with the long axis of the proximal phalanx. The intersection of the long axis of the first metatarsal and the proximal phalanx form the hallux abductus angle. It may deviate from 10 to 20 degrees, with an average of 15 degrees, without revealing any clinical deformity. The deviation occurs at the junction of the base and shaft of the proximal phalanx of the hallux and at the head of the first metatarsal. The articular surface of the base of the proximal phalanx of the hallux is angulated to its long axis as is the articular surface of the head of the first metatarsal. There is no perpendicular relationship between the articular surfaces and their long axes. The amount of deviation from a perpendicular relationship is known as the articular set angle. The articular set angle of the head of the first metatarsal varies from 5 to 8 degrees as does the articular set angle of the base of the proximal phalanx. The sum of the articular set angles accounts for a deviation of 10 to 20 degrees of hallux abductus in the normal foot (Fig. 1).

When the sum of the articular set angles of the head of the first metatarsal and the base of the proximal phalanx is greater than 15 degrees, the structural deviation of the hallux becomes clinically significant. The deformity may exist in the head of the first metatarsal (high proximal

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Figure 2: Correction of structural ankle abduction. The abduction is corrected in the following manner: (1) gentle traction on the forefoot, and (2) rotation of the forefoot in the plane of the tarsus.
A Review of the Syndrome with Particular Reference to Pseudopseudohypoparathyroidism

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