Unilateral Hallux Valgus: Is it True Unilaterality or Does it Progress to Bilateral Deformity?

Foot & Ankle Category: Midfoot / Forefoot

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Introduction
This study was undertaken to determine whether unilateral hallux valgus deformity progresses unilaterally, and to evaluate the demographics, etiologies, and radiographic findings associated with symptomatic unilateral hallux valgus deformities.

Methods
Patients treated for a hallux valgus deformity between January 2004 and December 2008 were identified, and of these, 39 patients with unilateral deformities were enrolled. The definition of unilateral hallux valgus was a hallux valgus angle (HVA) of the normal foot of less than 20 degrees and difference in intermetatarsal angle (IMA) between sides of over 5 degrees and a HVA difference of over 10 degrees. Progressions of deformities in normal feet were evaluated at last follow up visits, and the clinical information, and radiographic measurements of those with a deformed normal foot or an unchanged normal foot were compared.

Results
958 patients (1619 cases) underwent corrective surgery during the period mentioned above. 661 patients (1322 cases) underwent bilateral surgery for bilateral deformities, and 297 underwent unilateral surgery. Of these 297, 40 patients (4.17%) had a unilateral hallux valgus deformity on preoperative radiographs. The mean length of follow up was 48 months (range, 18 – 76 months). One patient died of a cardiac problem, and thus, was lost to follow up. Twenty-four cases had no deformity of the normal foot at last follow-up visits (the unchanged group), but 15 cases had developed hallux valgus deformity (the deformed group). No significant intergroup differences were found in terms of metatarsus adductus angle (MAA) (p=0.409), Meary angle (p=0.460), talocalcaneal angle (TCA) (p=0.633), or calcaneal pitch angle (CPA) (p=0.965). However, members of the deformed group were significantly younger at disease onset (p=0.02), exhibited a curved first metatarsal head (p=0.03), and had a larger initial HVA (p<0.01).

Conclusion
The frequency of unilateral symptomatic hallux valgus was found to be 2.5%, and significant differences were found between the deformed and unchanged groups in terms of age of onset, metatarsal head shape, HVA.