Recurrent Hallux Valgus: 15 Year Single Surgeon Series
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Introduction/Purpose: Recurrence of hallux valgus deformity can be a common complication after corrective surgery. The cause of recurrent hallux valgus is usually multifactorial, and includes patient-related factors such as preoperative anatomic predisposition, medical comorbidities, post-operative compliance, as well as surgical factors. This study examines a single surgeon’s consecutive series of corrective surgical cases for recurrent bunion deformity over a 15-year time span. The purpose of the study is to report on common characteristics of patients with symptomatic recurrent hallux valgus deformity, average time to recurrence defined as the time from index surgery to revision surgery, and identify potential associations or risk factors with respect to time to recurrence and revision surgery type.

Methods: A single board certified foot and ankle orthopaedic surgeon’s clinical charts and operative findings were compiled in a database over 15 years spanning from 2001 to 2016. 300 patients with recurrent hallux valgus diagnoses were identified and 254 had complete data. Revision surgeries included corrective surgery on the first ray, midfoot, or the forefoot as a result of prior hallux valgus surgery. Patient factors analyzed included diabetes, gender, smoking status, rheumatoid disease, neuromuscular disease, age at index surgery, index surgery, and number of prior surgeries. Preoperative revision surgery radiographic parameters measured included hallux valgus angle (HVA), inter-metatarsal angle (IMA), and sesamoid station. Revision surgery type and number of revision procedures were also logged. Full linear regression models were generated. The first model predicts the time to recurrence in months, while the second produced models that reported odds ratios of revision surgery.

Results: Average age at index surgery was 43 years old with 90% female and average BMI of 27 in this cohort. Average time to recurrence after index surgery was 14 years. Average radiographic data at presentation for revision surgery were HVA = 28.6, IMA = 12. Index surgeries included 41% distal osteotomy, 32% simple bunionectomy, while revision/corrective procedures included 35% proximal osteotomy, 44% receiving a 1st MTP/midfoot fusion, and 60% forefoot procedures. 32% required 1st MTP fusion at revision. Diabetes and higher HVA were statistically significant and directly associated with longer time to recurrence. Greater number of surgeries, older age, and index proximal osteotomy were associated with a quicker time to recurrence. Index surgery type did not have a significant association with revision surgery type.

Conclusion: To our knowledge this is the largest single surgeon series examining recurrent hallux valgus deformity. Most patients with recurrent symptomatic hallux valgus were women in their 6th decade with relatively normal BMI. Average time from index surgery to revision surgery was 14 years. Several factors including diabetes and greater HVA were associated with longer time to revision, while number of surgeries, older age, and proximal osteotomies were associated with earlier time to revision. 44% of patients required a MTP or midfoot fusion at revision. We did not see an association between type of index surgery and type of revision surgery.