Clinical Practice Guideline: **Syndactylization for Toe Deformities**

Date of Implementation: **October 15, 2015**

Product: **Specialty**

GUIDELINES

American Specialty Health – Specialty (ASH) considers procedures consisting of CPT Code 28280 to be medically necessary for syndactylization of toes (e.g., webbing or Kelikian type procedure) **upon meeting ALL of the following criteria:**

1. When used for the treatment of **1 or more of the following diagnoses**:

ICD-10 Code	ICD-10 Code Description
M20.10 - M20.12	Hallux valgus (acquired)
M20.20 - M20.22	Hallux rigidus
M20.30 - M20.32	Hallux varus (acquired)
M20.40 - M20.42	Other hammer toe(s) (acquired)
M20.5X1 - M20.5X9	Other deformities of toe(s) acquired
M20.60 - M20.62	Acquired deformities of toe(s), unspecified,

2. Failure of **at least 1 of the following** non-operative treatments:
    - Orthotics
    - Padding
    - Shoe modifications
    - Corticosteroid injections

CPT CODES AND DESCRIPTIONS

CPT® Code	CPT® Code Description
28280	Syndactylization, toes (e.g., webbing or Kelikian type procedure)

BACKGROUND

CPT code 28280 describes surgical procedures that produce an artificial syndactylism or webbing of the toes. Alignment of the bones may be corrected with osteotomies of the base of the proximal phalanx.

Digital deformities of the lesser toes are among the most common forefoot pathologies encountered by foot and ankle surgeons. Nonsurgical treatment is the initial treatment choice for the symptomatic lesser toe deformity. Among the various nonsurgical treatment options, orthotic devices or shoe insole modifications using a metatarsal pad may offer relief of excessive metatarsal head pressures. If local inflammation or bursitis exists, a corticosteroid injection into the affected area may be beneficial for pain but will not affect the deformity. Additionally, footwear changes such as a wider and/or deeper toe box may be used to accommodate the deformity and decrease shoe pressure over osseous prominences.

If standard non-operative options fail to improve functional limitation and relieve pain, surgical correction is the definitive treatment. The goals of surgery are to relieve pain, correct deformity, and to preserve or restore function and walking stability.

Hammer Toe Syndrome

The hammertoe deformity is the most common digital deformity. It occurs mostly in the sagittal plane, where the MTP joint is extended, the proximal interphalangeal joint is flexed, and the distal interphalangeal joint is extended. Claw toe deformity is similar in appearance to hammertoe, with the exception of the flexion contracture of the distal interphalangeal joint, and mallet toe deformity is identified by flexion contracture of the distal interphalangeal joint alone. There also are separate and distinct deformities involving the second toe and fifth toe. When an extension contracture is combined with medial deviation (subluxation) at the level of the second MPJ, a "crossover" second toe deformity results. This deformity often is combined with a hallux valgus deformity. Pain in and around the second MPJ that occurs before significant subluxation is seen is referred to as "pre-subluxation syndrome." Adduction or abduction digital deformities may involve all lesser MTP joints or, in some cases, divergent digital contractures are seen. Fifth toe pathology may include deformity in multiple planes (adductovarus deformity), or significant overlap of the fifth toe over the fourth toe may be seen.

In the treatment of a hammertoe deformity where recurrent subluxation is encountered, or when the initial dislocation is so severe that standard soft tissue release is metatarsal shortening is not sufficient, it may be necessary to take a more drastic approach. The physician can resect the base of the proximal phalanx rather than the metatarsal head. It is essential to stabilize the resultant unstable toe by syndactylization procedure (Gould et al., 2013).

Surgical syndactylization has been proposed as a salvage procedure in severe, recurrent toe deformities to avoid amputation. El-Masri et al. (2011) carried out a study to examine the outcomes of surgical syndactylization in 15 patients (mean follow-up of 32 months) for the treatment of 18 severe toe deformities (10 digitus superductus, 5 digitus varus, 3 hammer toes, 2 floppy toes, 2 floating toes). All patients suffered from recurrent deformities after

failed previous surgery. Clinical outcomes were assessed using subjective ratings and the American Orthopaedic Foot and Ankle Society (AOFAS) score for the lesser toes. There occurred no intra- or postoperative complications and no revision surgery was necessary. Eleven patients (73%) were very satisfied with the operative results, and four (27%) were satisfied. AOFAS scores significantly improved from 33.1 ± 18.4 points preoperatively to 84.0 ± 14.4 points at follow-up ($p<0.0001$). The results demonstrated that the surgical syndactylization between toes can be a successful salvage procedure for the treatment of recurrent severe toe deformities. Hence, surgical syndactylization can be considered as an alternative to toe amputation for severe, recurrent toe deformities.

Overlapping fifth toe is thought to be a congenital deformity characterized by the proximal phalanx dorsally subluxating and adducting on the fifth metatarsophalangeal joint. Pediatric overlapping fifth toe often corrects with normal ambulation and physicians only need to intervene if symptomatic deformity persists. Nonoperative optimization with strapping, splinting, and shoe modification would be reasonable first-line treatments. Surgical intervention includes percutaneous tenotomy, capsulotomy, syndactylization, tissue rearrangements, tendon transfers, phalangectomy, and toe amputation (Talussan et al., 2013). Syndactyly of the fourth to fifth digits is not commonly performed as a primary procedure for adductovarus deformity of the fifth digit. It is mostly used in cases in which previous surgery was performed to correct the deformity, but failed, leaving patients with an unstable, flail fifth digit (Zelen, 2013).

Hallux varus is a deformity in which the great toe is angulated medially at the MTP joint. The varus deformity of the toe varies in severity from only a few degrees to as much as 90 degrees. The proper treatment for congenital hallux varus depends on the severity of the deformity and the rigidity of the contracted soft structures. The Kelikian procedure is a useful procedure for the treatment of severe varus deformity with an excessively short first metatarsal (Coughlin et al., 2013).

All surgery carries risks, and these risks are of increased importance when they have the potential to affect the individual's ability to lead an active life, as they do with surgery of the foot and ankle. Patients considering surgery of the foot or ankle and their surgeons must thoroughly discuss and weigh the risks and benefits of the procedure.

Surgery performed solely for the purpose of improving the appearance or size of the foot or ankle carries risks without medical benefit, and therefore should not be undertaken (ACFAS, 2020).

PRACTITIONER SCOPE AND TRAINING

Practitioners should practice only in the areas in which they are competent based on their education, training and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner

to determine where they have the knowledge and skills necessary to perform such services and whether the services are within their scope of practice.

It is best practice for the practitioner to appropriately render services to a member only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently delivered by another health care practitioner who has more skill and training, it would be best practice to refer the member to the more expert practitioner.

Best practice can be defined as a clinical, scientific, or professional technique, method, or process that is typically evidence-based and consensus driven and is recognized by a majority of professionals in a particular field as more effective at delivering a particular outcome than any other practice (Joint Commission International Accreditation Standards for Hospitals, 2020).

Depending on the practitioner's scope of practice, training, and experience, a member's condition and/or symptoms during examination or the course of treatment may indicate the need for referral to another practitioner or even emergency care. In such cases it is prudent for the practitioner to refer the member for appropriate co-management (e.g., to their primary care physician) or if immediate emergency care is warranted, to contact 911 as appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice guideline for information.

References

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