Cavus Foot

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KEYWORDS

• Foot deformities • Cavus foot • Charcot–Marie–Tooth • Foot osteotomies

KEY POINTS

- Presentation of cavus foot requires complete physical examination and imaging to look for neurologic abnormalities.
- Charcot–Marie–Tooth disease presents in the young patient with symptoms such as abnormal gait, forefoot pain, and ankle instability.
- It is important to describe whether a cavus foot is flexible or rigid to decide on the indication for soft tissue surgery such as tendon transfers, usually associated with bony procedures.
- In cavus foot evaluation, it is important to determine the apex of the deformity (or deformities) to choose the best operative technique.
- Joint-sparing surgery such as tarsectomies are preferable alternative to triple arthrodesis.

INTRODUCTION

Cavus is the foot deformity described as a high plantar arch and a fixed forefoot equinus. Pronation of the first ray can also occur, and calcaneous could be in varus—cavovarus (most common)—or calcaneus–calcaneocavus. The heel could also be less commonly in valgus and/or equinus. Neurologic evaluation is mandatory, because cavus deformity is often associated with different neurologic entities, responsible for the imbalance of synergistic intrinsic and extrinsic muscles. Cavus deformity could be progressive or caused by paralytic soft tissue diseases, osteoarticular diseases, or trauma (**Figs. 1–3**, **Table 1**).

MORPHOLOGY

Polymorphism is the rule owing to the diversity of etiologic factors.

The authors have nothing to disclose.

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Fig. 1. Cavus foot.

Sagittal Plane Deformities

- *Posterior cavus foot* (calcaneus or vertical calcaneus deformity) is very disabling, and is caused by weakness of the Achilles tendon.
- *Anterior cavus foot* is the most common deformity. The metatarsals are in plantar flexion, specially the first ray, associated with claw toes. The intrinsic muscles are often weak and there is retraction of plantar soft tissue.

Claw toes are explained by disturbance of the foot muscular balance. Normally, intrinsic muscles flex the metatarsophalangeal joints and extend the interphalangeal joints. When the long flexor is activated over an extended toe, it glides over the metatarsal head and prevents forefoot flexion on the hindfoot.

Fig. 2. Clinical aspect of a cavus foot in Charcot–Marie–Tooth disease.