Cavus Foot Decision-making

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I. GENERAL TREATMENT PRINCIPLES
   A. Individualize; diagnose underlying neurologic cause and treat it if possible
   B. Consider patient age, location of deformity, severity of structural change, flexibility
   C. Underlying neuromuscular disorder may not be treatable, and muscle imbalance
      often not reversible, thus foot deformity may progress
   D. Goals of treatment: plantigrade, flexible, painless foot with balanced muscles
   E. Attempt to correct deformities, preserve motion and function,
      balance remaining muscles
   F. Need to consider possible salvage treatment if condition progresses after surgery
   G. Educate patient and family; further problems and subsequent treatment likely

II. NONOPERATIVE TREATMENT
   A. Important, but often unsuccessful; these deformities are often progressive,
      and disease is frequently advanced by the time patient presents for treatment
   B. Shoe modifications: low heel
   C. Foot orthosis to unload painful callus
   D. Bracing-hindfoot orthosis, ankle-foot orthosis

III. OPERATIVE TREATMENT
   A. Indications: pain and impairment from callosities, ankle instability/repeated
      sprains, progressive deformity
   B. Soft tissue reconstruction: plantar fascia release, tendon transfer, tendon lengthening,
      posteromedial release
   C. Osteotomies
      1. Calcaneus
      2. Metatarsal: proximal metatarsal, single or multiple (Watanabe 1990)
      3. Combined calcaneal osteotomy and metatarsal osteotomy and plantar fasciotomy
         (Sammarco 2001)
      4. Midfoot procedures: osteotomy, arthrodesis, osteotomy with arthrodesis
         Giannini 2003)
D. Arthrodesis-severe deformity, stiffness, arthritis, failed operations
   1. Limited hindfoot arthrodesis
E. Other: Gradual distraction osteotomies with external fixation
G. Clawtoes:
   1. Hallux procedures
   2. Lesser toe procedures

IV. RESULTS OF TREATMENT
   A. Summary of published, unpublished literature

V. COMPLICATIONS, FAILURES
   A. Results of treatment may not be stable over time because of progression of the disease
   B. Nonunion: osteotomy, arthrodesis
   C. Arthritis after osteotomies and arthrodeses
   D. Incomplete correction
   E. Gradual distraction osteotomies with external fixation: tendency for recurrence

VI. SURGICAL DECISION-MAKING
   A. Algorithm complex
   B. Subsequent treatment likely
   C. Principles

VII. REFERENCES


