Fibular hemimelia

Objectives
1. Define fibular hemimelia
2. Describe the spectrum of deformity seen within patients with fibular hemimelia
3. Describe current treatment approaches for fibular hemimelia

Discussion point
1. At what degree of severity is amputation and prosthetic fitting preferable to limb reconstruction?

Discussion
Fibular hemimelia is a paraxial deficiency with or without a terminal deficiency at the foot; which means there may be 5 rays present in the foot or a deficiency of the lateral rays. Tarsal coalition is common. The tibia, unsurprisingly, has an anterolateral bow. Femoral shortening may accompany fibular hemimelia, if it does, the lateral femoral condyle is always deficient. The most useful classification is that of Achterman and Kalamchi; Type I has part of the fibula present, in type II, the fibula is absent. Type I is subdivided according to the amount of fibula remaining. Limb length discrepancy is proportional to the amount of fibular absence. An alternate classification has been proposed by surgeons at the Texas Scottish Rite Hospital, based on the question, “Is the foot functional?” If the foot is not functional, amputation and prosthetic fitting is preferred. Many patients with type I fibular hemimelia may undergo successful lengthening and stabilization procedures for the foot. There is presently some controversy about type II deficiencies. Unpredictable growth retardation of the tibia and femur has been reported following lengthening of the tibia with severe fibular hemimelia, leading some to abandon this approach for type II deficiencies. Complex assemblies for lengthenings are required to protect the foot from further deformity when lengthening for fibular hemimelia. Patient satisfaction following Symes amputation and prosthetic fitting is high. This is optimally performed prior to the time the child would normally ambulate.

References


