



POSNA

The Core Curriculum

Posteromedial bowing of the tibia

Objectives

1. Describe the physical and radiographic features of posteromedial bowing of the tibia
2. Describe the natural history of posteromedial bowing of the tibia
3. Discuss treatment of posteromedial bowing of the tibia

Discussion point

1. What is the relationship of the percentage of tibial shortening noted at 12 months of age to that at skeletal maturity?

Discussion

Congenital posteromedial bowing of the tibia is an unusual anomaly. The posture of the newborn with posteromedial bowing is characteristic, with marked calcaneovalgus and dorsiflexion of the foot, which may even be opposed to the tibia. Radiographs reveal posteromedial bowing and variable shortening of the tibia, bowing of up to 70 degrees has been reported. Some limitation of ankle motion persists, and the foot may be smaller. Final leg length discrepancies of between 1.9 and 6.9 cms have been reported. In Pappas' series, the percentage of tibial shortening noted at 12 months remained constant throughout growth; more discrepancy was associated with more severe bowing. The bowing resolves with time, a mild residual medial bow often remains. No treatment for bowing is necessary or indicated. Treatment for leg length discrepancy can range from a nothing through a shoe lift, physical arrest of the contralateral leg to tibial lengthening. Serial documentation of discrepancy throughout childhood is advisable.

References

1. Pappas AM. Congenital posteromedial bowing of the tibia and fibula. *Journal of Pediatric Orthopedics* 1984;4(5):525-31.
2. Hofmann A, Wenger DR. Posteromedial bowing of the tibia. Progression of discrepancy in leg lengths. *Journal of Bone & Joint Surgery - American Volume* 1981;63(3):384-8.
3. Yadav SS, Thomas S. Congenital posteromedial bowing of the tibia. *Acta Orthopaedica Scandinavica* 1980;51(2):311-3.
4. Bray CB, Follows JW. Congenital posterior angulation of tibia and fibula. *Southern Medical Journal* 1975;68(3):292-6.