Le pied bot varus équin : traitement chez l’enfant et devenir à l’âge adulte

Congenital club foot: treatment in childhood, outcome and problems in adulthood


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ABSTRACT

Purpose of the symposium
Treatment of idiopathic talipes varus, or congenital clubfoot, is designed to realign the foot to alleviate pain and allow plantigrade weight bearing with adequate joint motion despite the subnormal radiographic presentation. This symposium was held to review current management practices for congenital clubfoot in children and to analyze outcome in adults in order to propose the most appropriate therapeutic solutions.

Management of congenital clubfoot in children
Idiopathic talipes varus can be suspected from the fetal ultrasound. Parents should be given precise information concerning proposed treatment after birth. Deviations must be assessed in the newborn then revised regularly using objective scales during and after the end of treatment. This enables a better apprehension of the evolution in comparison with the severity of the initial deformation.

Conservative treatment is proposed by many teams: a functional approach (rehabilitation and minimal use of orthotic material) or the Ponseti method (progressive correction using casts associated with percutaneous tenotomy of the calcaneal tendon) are currently preferred. If such methods are insufficient or unsuccessful, surgery may be performed as needed at about 8 to 11 months to achieve posteromedial release. Good results are obtained in 80% of patients who generally present minimal residual deformations (adduction of the forefoot, minimal calcaneal varus, residual medial rotation, limitation of dorsal flexion), which must be followed regularly through growth. The difficulty is to distinguish acceptable from non-acceptable deformation.

At the end of the growth phase, severe articular sequelae are rare (stiff joint, recurrence of initial deformation, overcorrection) but difficult to correct surgically: osteotomy, tendon transfer, double arthrodesis, Ilizarov fixator. Gait analysis is essential to quantify function and obtain an objective assessment of the impact on higher joints, providing valuable guidance for surgical correction.

Outcome in adulthood
There have been very few studies evaluating the long-term functional outcome after treatment during childhood. According to two studies presented at this symposium (Brussels, Lausanne), results have been generally good but with subnormal radiographs irrespective of the type of treatment or how early treatment started in childhood. Hypoplasia of the talus dome is a constant finding and is correlated with limitation of dorsal flexion of the ankle joint. A small degree undercorrection is often observed but well tolerated while overcorrection is generally less well tolerated. Functional outcome depends highly on preservation of subtalar joint motion.

There have been no reports on the results of treatment of sequelae in adults. Most problems (pain, stiffness, osteoarthritis) are observed in the mid or rear foot. Indications for conservative surgery (osteotomy) of the mid or rear foot are rare compared with indications for combined arthrodesis. Talocural decompression is a turning point observed in the adult. Management at this point is difficult: fusion of the ankle worsens the situation by increasing the stress on the forefoot and aggravating the disability; implantation of an ankle prosthesis is technically difficult and remains to be fully developed. Treatment of the dorsal bunion of the great toe may require tendon transfer and/or fusion.

Conclusion
A child born with clubfoot will never have a normal foot in adulthood. Sequelae present at the end of growth will intensify during adult life; undercorrection is easier to treat in adulthood than overcorrection. The most difficult problems in adulthood are: neglected clubfoot, over correction, and degradation of the talocrural joint.

Key words: Clubfoot, treatment, child, adult.