

Clubfoot Treatment Guidelines Handout

Clubfoot is a congenital condition characterized by an inward and downward twisting of one or both feet at birth. This anomaly affects the bones, muscles, tendons, and ligaments of the foot, leading to an abnormal positioning that can impair mobility if left untreated.

Causes

The exact cause of clubfoot remains unclear, but it is believed to result from a combination of genetic and environmental factors. It can occur sporadically or be inherited, with some cases associated with other birth defects or genetic syndromes.

Symptoms

The primary symptom of clubfoot is the foot's abnormal appearance, where the affected foot may appear smaller and turned inward. Other symptoms include a stiff foot or limited range of motion in the ankle and foot joints.

Types

There are two main types of clubfoot:

- **Isolated or Idiopathic clubfoot:** This is the most common type, occurring without any other birth defects.
- **Non-Isolated or syndromic clubfoot:** This type is associated with other congenital anomalies or genetic syndromes, such as spina bifida or arthrogyposis.

Nonsurgical treatment options

The initial treatment of clubfoot is nonsurgical, regardless of how severe the deformity is.

Ponseti method

This is a nonsurgical treatment approach that involves gentle manipulation and casting of the foot to gradually correct the deformity. The foot is then maintained in a brace to prevent relapse. Ideally, treatment should commence soon after birth; however, older infants have also experienced successful outcomes with the Ponseti method.

French method

Another nonsurgical approach to correcting clubfoot involves stretching, mobilization, and taping. Known as the French method—or the functional or physical therapy method—it is typically overseen by a physical therapist with specialized training and experience.

Similar to the Ponseti method, the French method begins shortly after birth and requires active family participation. Each day, the baby's foot must be stretched and manipulated, then taped to preserve the range of motion achieved. Following the taping, a plastic splint is applied to maintain improved mobility.

This regimen necessitates approximately three visits to the physical therapist each week. Given its daily nature, the therapist will teach the parents how to perform the procedure correctly at home.

Surgical treatment options

In some cases, nonsurgical treatments may not be sufficient to fully correct the clubfoot deformity. In such instances, surgical interventions may be necessary:

- Less extensive surgery focuses on the specific tendons and joints causing the deformity. Often, this entails releasing the Achilles tendon at the back of the ankle or repositioning the tendon that runs from the front of the ankle to the inside of the midfoot, known as an anterior tibial tendon transfer.
- Major reconstructive surgery for clubfoot involves the extensive release of multiple soft tissue structures, including ligaments and tendons. After achieving the correction, the foot's joints are typically stabilized with pins and a long-leg cast to ensure proper healing of the soft tissue.

References

American Academy of Orthopaedic Surgeons. (n.d.). *Clubfoot* - *orthoinfo* - AAOS. <https://orthoinfo.aaos.org/en/diseases--conditions/clubfoot/#:~:text=Major%20reconstructive%20surgery%20for%20clubfoot>

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