

## **Physical therapy with a long leg cast? A fascial approach is possible and effective during cast immobilization**

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**Background:** The surgical transposition of the anterior tibial tendon to the third cuneiform, has been used to complement Ponseti method for clubfoot and followed by cast immobilization with a long leg cast up to the thigh, fixing the foot in abduction and the knee in 90 degrees of flexion. The long period of immobilization, between 1 and 4 weeks before surgery and 6 weeks after, results in multifunctional impairments as osteopenia, atrophy and contracture of the involved muscles. Pain, joints stiffness, balance disorders, poor postural control, loss of muscular strength and proprioception during gait are some of the difficulties faced during the rehab sessions.

We suggest a physical therapy approach to be conducted during the period of postoperative immobilization, in order to minimize these consequences, maintaining the bio mechanic integrity of the whole limb and thus, accelerating the process of rehabilitation after cast removal.

**Method:** A 4 years old child was subjected to 8 sessions of physiotherapy after surgery during cast immobilization. For proper and safe approach, several techniques of manual therapy were adapted so that still had the ability to interfere distant to the casted lower limb. The pompage was carried out through the ends of the casted limb, then the abdominal fascia were mobilized and so lumbar-pelvic and phalanges. Thus, it is possible to avoid joint contracture and hip joint flexor shortening, maintaining the tonus of fascia and muscles, improving nutrition of cartilage surfaces

**Result:** After removing the cast, the child presented a less compromised pool of consequences than that observed in children who did not do physical therapy during cast period. Wasn't observed hip retraction, the muscles atrophy was less significant as well as osteopenia. The standing position was maintained without support and gait developed more easily when compared with children who did not underwent physiotherapy during immobilization.

**Conclusion:** This case suggests that physiotherapy during immobilization may be the key to a rehabilitation process less painful, with a faster recovery for those children undergoing this type of surgery. We can extend the proposal to other treatments involving long-term cast immobilization.