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Case report: peroneus brevis tendon transfer in a severe anterior tibial and extensor hallucis longus tendon injury in a child

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Introduction: Anterior tibial tendon ruptures are quite rare. All studies found in the literature refer to the adult population, with no reports of this injury in the pediatric population. The literature on the treatment of this injury is scarce.

Objective: To report the case of a child subjected to peroneus brevis tendon transfer for the sequela of a severe anterior tibial and extensor hallucis longus tendon injury.

Methods: Male patient, 8 years of age, was run over by a car and sustained an exposed tibial fracture and major soft-tissue injury of the foot. Anterior tibial, posterior tibial and extensor hallucis longus tendon rupture were detected. Damage control, soft-tissue cover and conservative treatment of the anterior tibial and extensor hallucis longus tendons were initially performed; however, the conservative treatment failed, and valgus deformity and pronation developed. Subsequently, tenoplasty (posterior tibial tendon), the Strayer procedure (gastrocnemius recession of the Achilles tendon) and elongation of the peroneus longus and brevis tendons were also performed, but the patient experienced deformity recurrence. Subcutaneous peroneus brevis tendon transfer to the navicular was then chosen, with postoperative use of an ankle-foot orthosis (AFO) and physical therapy.

Results: The deformity was improved. The patient progressed with satisfactory gait and strength. He currently walks without support using an AFO. Both the patient and his family were satisfied with the functional outcome of the tendon transfer.

Conclusion: Reconstruction of anterior tibial and extensor hallucis longus tendon rupture through peroneus brevis tendon transfer is a viable and reliable treatment option. No complications such as adhesions or correction failure were observed, thus corroborating the viability of this method.

Keywords: Tendon transfer; Rupture; Wounds and injuries; Traumatology.

