

# Epidermoid Cyst in Tendon Achilles Following Percutaneous Tenotomy in Congenital Talipes Equinovarus: A Case Report

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## Abstract

An unusual case of implantation dermoid cyst of the tendoachilles which was symptomatic. This report discusses the possibility of such implantation dermoid cysts after percutaneous procedures such as the percutaneous tendon Achilles tenotomy for congenital talipes equinovarus.

**Key words :** CTEV, Epidermoid cyst

## Introduction

Tendinous soft tissue swelling in children below 5 years is a rare entity [1]. Here, we present a case of an asymptomatic swelling of the tendon Achilles in a patient with recurrent congenital talipes equinovarus (CTEV) who was operated for posteromedial soft tissue release.

## Case Report

A 3-year-old child with bilateral CTEV presented to the clubfoot clinic with a recurrence of his deformities. At the age of 4 months, the child was treated with serial manipulation and casting using Ponseti technique. He also underwent bilateral percutaneous tendon Achilles tenotomy under oral sedation to achieve dorsiflexion. After removal of the final cast, the child was put on foot abduction orthosis and was maintaining regular follow-up. At the age of 10 months, the parents brought the child on regular follow-up and noticed that

swelling was present on the posterior aspect of the left leg, beneath the scar of the tenotomy. On examination, the swelling was smooth, non-tender, with the scar puckered over it. The swelling could be moved side to side, but not vertically. The fluctuation was positive; however, it was non-compressive and non-pulsatile. Transillumination was negative. The parents were counseled to observe the swelling and continue regular follow-up. At the age of 3 years, the child presented with recurrence of equinovarus deformity in the right foot and an isolated equines deformity of the left foot. The left foot continued to have the swelling beneath the scar, but it was larger in size (25 mm × 15 mm). The child was taken for bilateral posteromedial release under general anesthesia for correction of the foot deformities. The cyst was found to be in the substance of tendon Achilles. The cyst ruptured intraoperatively, and a white cheesy material was extruded. The cyst was excised with its covering sheath and sent for histopathological examination, which confirmed a diagnosis of epidermoid cyst.

## Discussion

Epidermoid inclusion cysts can result

from any trauma or surgical procedure wherein the epidermal components of the dermis get implanted into deeper tissues [2]. In English literature, epidermoid cysts have not been reported in cases of clubfoot correction with percutaneous tenotomy. Tendon Achilles tenotomy is a routine procedure in CTEV correction with Ponseti technique [3]. It can be performed in mini-open or percutaneous methods. In 90% of cases, it is important to do this procedure to achieve adequate dorsiflexion [4]. In his series of 219 patients, Dobbs et al. reported 4 cases of complications, all of which were due to excessive bleeding and were managed conservatively. Three cases were attributed to peroneal artery injury, and one was due to saphenous vein injury [5]. Mardjetko et al. reported four cases of pseudoaneurysms in his review of 2756 patients undergoing foot and ankle procedures, which included a case of open clubfoot release through the Cincinnati approach, plantar fasciotomy for spastic cavus, tendon releases, and combined bone soft tissue procedure for recurrent clubfoot [6]. Burghardt et al. reported a case of pseudoaneurysm in the left leg in a case of bilateral CTEV

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**Figure 1:** (a) Posterior soft tissue release with exposed tendon Achilles tendon with the swelling. (b) White creamy material extruding from the cyst, which was later excised with its sheath.

treated with percutaneous tendon Achilles tenotomy [7]. Lewis et al. reported a novel complication of rupture of a pseudoaneurysm of the posterior tibial artery which led to the collapse of the infant and needed resuscitation [8]. Epidermoid cysts are benign cysts which are site-specific and

generally a complete history, and physical examination is enough to diagnose this condition. Ultrasound and other imaging modalities can be performed to delineate its anatomy and to rule out pseudoaneurysm.

Histological examination reveals cysts lined with stratified squamous

epithelium with granular cell layer and is filled with eosinophilic lamellate keratinous material. Provided they are asymptomatic; epidermoid cysts seldom require excision. Due to their asymptomatic presence, it is probable that these lesions are often overlooked. However, it is important that these swellings undergo Doppler ultrasound scanning to rule out pseudoaneurysm, which is a potentially serious complication that can warrant immediate attention.

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