

CASE REPORT

ANGIOLEIOMYOMA OF THE KNEE A CASE REPORT

E. THIENPONT¹, S. GEENS², G. NELEN²

The authors report a case of an angioleiomyoma at the anteromedial side of the knee mimicking a neurofibroma of the infrapatellar branch of the saphenous nerve. Angioleiomyomas are benign soft tissue tumors with a predilection for the lower extremities in middle-aged females. Paroxysmal pain is triggered by pressure, cold and hormonal changes. Simple excision is usually curative.

Key-words : knee ; angioleiomyoma ; soft tissue tumor.
Mots-clés : genou ; angioleiomyome ; tumeur des tissus mous.

INTRODUCTION

Angioleiomyoma is a benign tumor with a predilection for the lower extremities in middle-aged females (1, 4, 6, 8-10). Angioleiomyoma is encountered in less than 5% of all benign soft tissue neoplasms (4, 8-10). Usually this tumor presents as a painful, solitary, subcutaneous lesion located in the soft palate, eyelid, external auditory canal, urethra, vulva, intestine and especially hands and feet (1, 4, 6, 8-10). To the best of our knowledge this is the first case of an angioleiomyoma of the knee to be reported in the English literature until now.

CASE REPORT

A healthy 47-year-old woman presented with a small painful nodule located subcutaneously at the anteromedial flare of the tibial plateau, a few centimeters below the joint line of her right knee.

Exposure to cold and local pressure elicited attacks of paroxysmal pain. This pain was often burning and excruciating in intensity. She tried to keep this small tumor warm and avoided tight clothing. Two steroid infiltrations were successful for a few months each. There was no history of trauma or surgery of the knee.

On physical examination the tumor presented as a small nodule of 1cm in diameter, located at the anteromedial side of the knee. This mass was mobile and very painful on palpation. Further examination of the knee was noncontributive.

Owing to the location of the tumor, a neurofibroma of the infrapatellar branch of the saphenous nerve was suspected.

At the time of surgery we found a soft nodule, loosely connected to the surrounding subcutaneous tissues (fig. 1). The afferent and efferent vascular bundles were both ligated and the tumor was completely resected.

Pathologic appearance was characteristic for an angioleiomyoma (fig. 2).

At one year postoperative evaluation she was completely pain free, and no recurrence of the tumor had occurred.

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Fig. 1. — Clinical appearance of the tumor at the anteromedial flare of the tibia.

DISCUSSION

Angioleiomyomas occur most commonly in the lower limb followed by the upper limb and trunk (1, 4, 6, 8). These tumors are found especially in middle-aged females (1, 4, 6, 8). Angioleiomyomas are painful in 50% of cases with pain being triggered by pressure, cold and hormonal changes (1, 4-8). The pathogenesis of this pain is still unknown. Increased mast cell degranulation (5) and small nerve fibers, immunoreactive for S-100 protein and PGP 9.5 (7), were proposed as a mechanism to clarify this pain. History and clinical exam may suggest the diagnosis. Typically an angioleiomyoma is a small palpable nodule in the subcutaneous tissue. Exposure to cold and local pressure will cause attacks of paroxysmal pain. This pain is often burning and excruciating in intensity. Patients try to keep this small tumor warm and avoid tight clothing or local pressure. Steroid infiltrations relieve pain sometimes for a few months. Usually MRI and rarely angiography complete the work-up (1, 4, 9, 10). This tumor has to be differ-

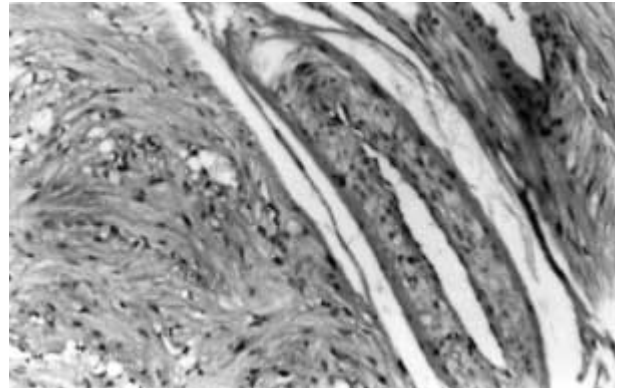


Fig. 2. — Microscopic image of the angioleiomyoma shows fascicles of smooth muscle bundles on the left side of the figure and a couple of thick-walled vessels on the right side.

entiated from a glomus tumor, hemangioma and neurinoma on pathologic examination (1-4, 9, 10). Angioleiomyomas are composed of muscular and vascular components. Usually proliferation of smooth muscle bundles surrounding thickened vascular channels are found and can be classified histologically into solid, cavernous or venous lesions depending on the different shape of the vascular cavities. The thick-walled vessels of this lesion resemble arteries, but lack an internal and external elastic lamina (1, 4, 6, 7).

The treatment consists of complete resection (1, 4, 6, 8, 9). Only few recurrences have been reported in benign cases (4, 6, 8). In case of recurrence, vascular leiomyosarcoma must be excluded (4, 6, 8).

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SAMENVATTING

E. THIENPONT, S. GEENS, G. NELEN. Angioleiomyoma ter hoogte van de knie.

De auteurs stellen een geval voor van een angioleiomyoma aan de anteromediale zijde van de knie waardoor

aan een neurinoma van de infrapatellaire tak van de nervus saphenus werd gedacht. Angioleiomyoma zijn goedaardige weke delen tumoren met een voorkeur voor het onderste lidmaat bij vrouwen van middelbare leeftijd. Paroxysmale pijn wordt uitgelokt door lokale druk, koude en hormonale veranderingen. Resectie van de tumor is gewoonlijk curatief.

RÉSUMÉ

E. THIENPONT, S. GEENS, G. NELEN. Angioleiomyome du genou : présentation d'un cas.

Les auteurs rapportent un cas d'angioleiomyome de la région antéro-médiale du genou, qui se présentait cliniquement comme un neurinome de la branche infrapatellaire du nerf saphène. L'angioleiomyome est une tumeur bénigne des tissus mous qui manifeste une prédilection pour les extrémités inférieures chez des sujets d'âge moyen, de sexe féminin. Il est à l'origine de douleurs paroxystiques, qui sont réveillées par la pression, le froid et par des variations hormonales. L'excision simple entraîne habituellement la guérison.