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Mucoid Cyst Compression of the Tibiofibular Articulation than a Case Report and Literature Review

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ABSTRACT

Mucoid cysts tibiofibular joint top (TFS) is a rare cause of nerve compression at the knee. We report the observation of a soldier of 46 years, who presented with painful swelling sitting at the top of the anterolateral aspect of the left leg third with peroneal neuralgia, lasting for four months. Clinical examination revealed an oval mass, deep, sensitive, poorly demarcated sitting on top of the anterolateral compartment of the right leg third. Ultrasound and magnetic resonance imaging (MRI) of the knee revealed an intramuscular myxoid cyst Depond joint superior tibiofibular. Electromyogram (EMG) was in favor of an invasion of the superficial peroneal nerve. A biopsy excision of the lesion was performed. Pathological examination confirmed the diagnosis of a mucoid cyst. The evolution is marked by the complete disappearance of pain, recovery of normal sensitivity and lack of recurrence after a year of decline.

Introduction

The compressive mucoid cyst tibiofibular joint top is a disease rarely reported in the literature. The authors report a case of a mucoid cyst TFS superficial peroneal nerve compression joint with literature review.

Observation

46 year old patient, active military, no particular history, who presented with painful swelling sitting at the top of the anterolateral aspect of the left leg third with radiating paresthesia on the anterior lateral surface of the leg up the dorsal aspect of the left foot, lasting for four months with no notion of trauma. Locally we fingered an oval mass, deep, sensitive, poorly demarcated sitting on top of the anterolateral compartment of the right leg third with a positive Tinel sign and hypoesthesia of the territory of the superficial peroneal nerve. The standard radiology showed no bone lesions. Ultrasound highlighted cystic lesion multiloculée at the anterolateral aspect of the upper third of the leg. The MRI showed a liquid formation up to the lower part of the joint and proximal tibiofibular which extended distally into the lodge fibular muscles. The training was hypointense T1 (Figure 1) and T2 hyperintensity (Figure 2). Electromyogram was in favor of an invasion of the superficial peroneal nerve. A biopsy excision of the lesion was performed. The Surroundings was anterior external transmuscular focused on the tumor in front of the superficial peroneal nerve (Figure 3). Exploration multiloculée showed cyst formation, taking original TFS at the joint, to the content and viscous mucoid intramuscular fibular development. Complete excision of the cyst was associated with excision and ligation of its neck at the TFS joint. Pathological examination was in favor of a mucoid cyst with fibro-hyaline wall bordered by a thick coating endothéliforme. Postoperatively, the patient resumed its activities in a normal way with pain relief and recovery of normal sensitivity. A 1 year follow-up, there was no evidence of any recurrence.

Discussion

Mucoid cysts at the expense of joint TFS intramuscular and compressing the superficial peroneal nerve were rarely reported. They are found often described in a series reporting their locations in intra and extra-neural [1]. The pathogenesis of mucoid cyst is controversial and several theories have been proposed [2]. The synovial origin, the most commonly accepted, attributes the cyst with joint synovial herniation. It can explain the volatility of the volume of certain cysts and progressive distal migration. The trauma may explain the appearance of cysts offset an intraosseous hematoma, intramuscular or intra-neural without identifiable joint channel. The tumor origin was primarily raised for intra-neural cysts on the basis of a cystic degeneration of certain schwannomas. Finally, based on a degenerative slime fibroblast metaplasia of some periarticular tissues or embryonic synovial residues can be grafted on any other origin. So it would be an entanglement of several theories [3]. The cyst expands at varying speeds, it comes and compress the surrounding elements and even give real intraosseous gaps. An intimate bond with an articular branch of the peroneal nerve could, as was described Parkes and Pazzaglia, result in fusion of the cyst wall with épinerve and passage of mucoid material intra-neural. The intraneural location of the cyst was most frequently reported by the authors [4,5,6]

All locations have been described in the anterior tibial muscle, between the tibialis anterior and extensor digitorum longus, between extensor hallucis longus and extensor digitorum longus, at the peroneus longus muscle and the muscle soleus [7] . At the level of muscle lodge, the cyst may be giving a compression compartment syndrome at minimum (anterior or external) with dysesthesia and muscle weakness up to a real paralysis by direct extrinsic compression of the common peroneal nerve or of one of its branches. [8] As in our case, a compartment syndrome in the anterior tibial compartment or at the lodge of the peroneal muscles, may occur with exertion. [9] The clinical diagnosis is not always obvious. Indeed, the cyst may be small intramuscular and completely non-palpable size and it is sometimes a feeling of muscle strength that real well limited swelling. Plain radiography is often negative, however arthrography of TFS more articulation or less coupled to the scanner can show a relationship (with a thin stalk) between the cyst and the joint. The opacification of the cyst mucoid is often late and sometimes requiring partial snapshots delayed. [10]

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Ultrasound is a good noninvasive initial review recognizing the cystic nature of the swelling. MRI is critical, intramuscular location of the cyst is demonstrated and the relationship with the adjacent structures. The appearance iso or hypointense T1 and T2 hyperintense reported by several authors [4,5, 7, 9,10] is not specific. The differential diagnosis with benign or malignant tumor of the soft parts can be installed and justified. The excision of the cyst should be complete resection and ligature of the neck at the end to avoid any recurrence. Dissection between the cyst wall and the muscle fibers is sometimes difficult while the distal junction with the muscle fascia is easily identifiable. We believe that there is no room for gestures such as minimum needle aspiration reported by some authors [4, 6]. If intraneural location, several authors now agree to conduct a flattening of the cyst by a longitudinal incision of the nerve under a microscope. This gesture is associated with a ligature collar sacrificing sensitive articular branch of the peroneal nerve to prevent recurrence [1, 2, 5, 6.9].

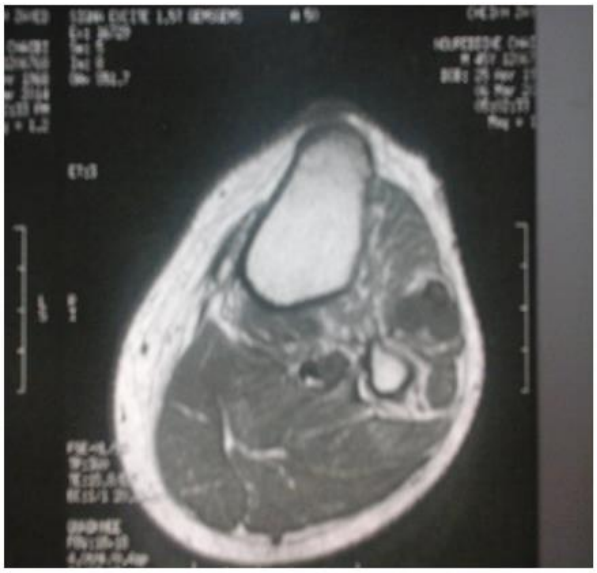

Figure 1. Cross-sectional weighted T1 MRI showing a multi-celled training, signal hypointense

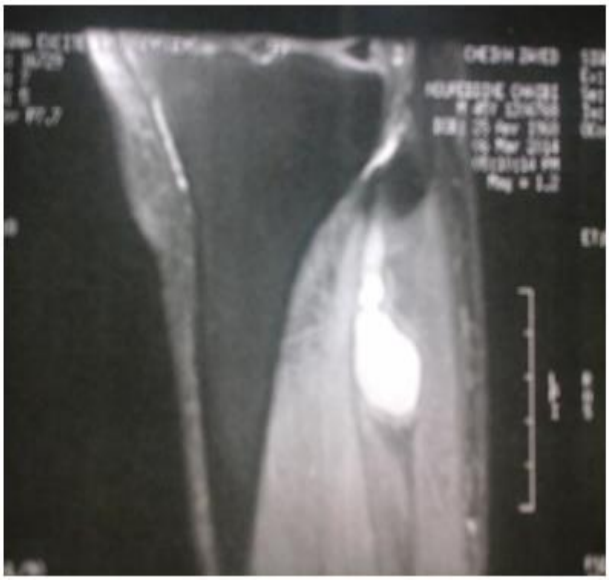

Figure 2. MRI T2-weighted coronal section showing a hyper intense lesion

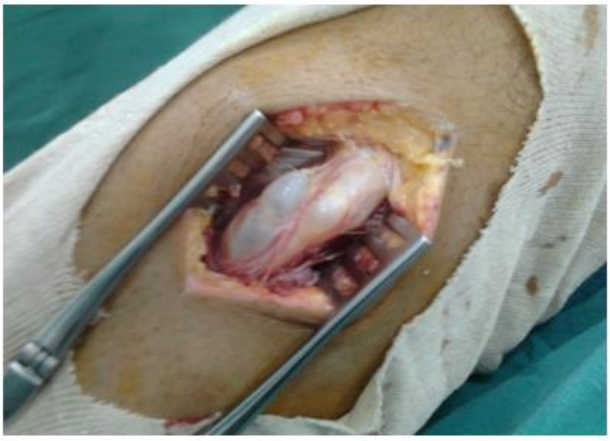

Figure 3. Showing dissection and resection mucoid cyst compressing the superficial branch of SPE

Conclusion

Mucoid cysts TFS joint are rarely due to a compression syndrome of the superficial peroneal nerve. MRI plays an important role in the diagnosis. A well-conducted surgical treatment gives good results.

Competing interests

The authors declare that they have no conflicts of interest related to this article.

Authors' contributions

All authors contributed to this work. All authors also report having read and approved the final manuscript.

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