ABSTRACT

We report a case of a 33-year-old male who has a bilateral painful mass in the dorsum of wrist which was diagnosed by his general practitioner as a ganglion cyst and referred to us for surgery. Ultrasound revealed a soft tissue mass with muscle-like echo texture. Surgical exploration revealed the presence of bilateral Extensor digitorum brevis manus (EDBM) muscle and excision of the two masses was performed.

This case incite the clinician to be aware of the presence of this muscle when treating a dorsal mass of wrist.

We propose an algorithm for therapeutic management of EDBM

KEYWORDS: Bilateral; Extensor digitorum brevis manus muscle; Pain; Swelling; Therapeutic algorithm

INTRODUCTION

The extensor Digitorum Brevis manus (EDBM) is a supernumerary muscle located on the dorsum of the hand, exactly in the fourth compartment of extensor tendons. It was first described by Bernhard Albinus in 1734 [1].

It’s present in nearly 4% of the dissected cadavers: 2.5% of the dissected hands and bilaterally in 26% of cases [2]. This muscle is rarely symptomatic and is often discovered during cadaveric dissections and surgical procedures. Symptoms consist of chronic pain and/or swelling on the dorsum of the wrist. In the literature, few articles were published on the association of pain and swelling in symptomatic EDBM. We report a case of bilateral symptomatic EDBM with pain and swelling which was managed surgically.

CASE

A 33-year-old male patient was referred to our hospital by his general practitioner for bilateral painful ganglion cyst of his two wrists. Clinical examination showed a bilateral, fusiform, soft, mobile mass on the dorsum of wrists, most salient and firm at 40° of wrist flexion and active finger extension (Fig. 1). Real time ultrasonography revealed a soft-tissue mass with muscle-like echo texture, with morphologic changes during finger mobilisation (Fig. 2.3).

Surgical excision of the two supernumerary muscles was performed. In the two hand, muscle was located between index and major extensor tendons and both of these tendons were anatomically normal (Fig. 4.5.6).
Patient has been followed without any complications or complaint for one year.

**Fig.1**: Mass of the dorsum of the two hands

**Fig.2, 3**: Ultrasound of the dorsum of wrist showing a soft-tissue mass with muscle-like echo texture

**Fig.4, 5, 6**: Intraoperative photo of the EDBM

**Fig.7**: Algorithm for therapeutic management of EDBM

**DISCUSSION**

Symptomatic cases involving the EDBM are sporadically reported in the literature, and most of them are old [3]. These muscles are usually identified through clinical symptoms as chronic pain or swelling on the hand after repeated exercise or both (our case), and can be misdiagnosed as dorsal wrist ganglion, exostosis, tendon sheath cyst, tenosynovitis or benign tumor mass [4].

Clinicien must be aware of the presence of this muscle when treating a dorsal mass of wrist. Real-time ultrasonography reveals a soft-tissue mass with muscle-like echo texture, which undergoes morphologic changes during active finger extension and is largely sufficient to ensure diagnosis [5]. However MRI is the best investigation in doubtful cases.

The most common surgical treatment reported in the literature has been excision of the muscle and is recommended when there is pain and swelling [6].

We believe that if pain is the only reason for consultation, extensor retinaculum release should be the primary treatment, because it is secondary to muscle compression within the rigid dorsal compartment. Otherwise if both pain and swelling are present, excision of the muscle is recommended. Finally
excision is indicated in painless swelling for cosmetic reasons. We suggest a therapeutic algorithm for this rare condition even if there is low-level of evidence (Fig.7)

REFERENCES

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