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- 'docendo ac discendo' - 'by teaching and learning'

In this issue:

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Our sincere gratitude for the kind support from Sir Liam Donaldson, the Chief Medical Officer for England, United Kingdom.

The International Journal of Clinical Skills looks forward to contributing positively towards the training of all members of the healthcare profession.

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A Message from the Chief Medical Officer for England, United Kingdom

The systematic and safe acquisition of high quality clinical skills is an essential part of modern medical training as highlighted in my Annual Report published in March 2009. I wish the International Journal of Clinical Skills every success in highlighting research and knowledge in this important area.

Sir Liam Donaldson
The Chief Medical Officer for England

A rare case of spontaneous onset tibialis anterior muscle hernia. Should it always be treated?

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Abstract

Muscle hernias of tibialis anterior muscle are rare especially in the absence of collagen deficiency disorders. This paper reports the case of a 41 year old male patient who presented with a spontaneous onset asymptomatic hernia of the tibialis anterior muscle. The patient underwent a primary repair of the defect with a double breasting technique with no immediate or late post operative complications and a successful outcome on follow up. In the context of clinical skills this simple, but rare case, highlights that a surgeon should not only know how to operate, but also know when, and when not to, operate.

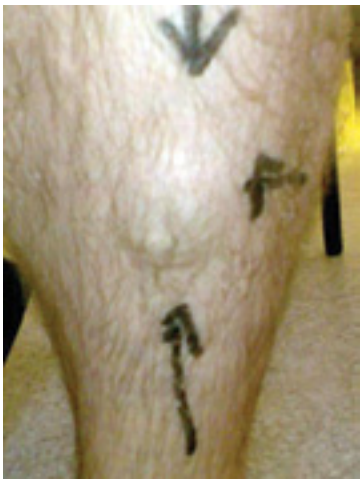
Introduction

Muscle hernias of tibialis anterior muscle are not unheard of, but the spontaneity in their onset is very rare, especially with no collagen deficiency disorders. They can be managed both non-operatively and operatively. There have been various techniques described in literature for the repair, all of which have their limitations. The main concern with primary repair is development of post operative compartment syndrome.

Presented is the case of a male who underwent primary repair with an excellent outcome together with a review of the literature about the current options available.

Case report
A 41 year old previously fit and well patient was referred to our outpatient clinic with an approximately 7 month history of an asymptomatic solitary soft swelling on the anterolateral aspect of his left leg, which was progressively increasing in size. There was no history of direct trauma to the leg and no significant past medical or family history. No history of repetitive stress to the leg from occupation or recreational activities was elicited.

Figure 1: Anterior view of the tibialis anterior muscle hernia



The patient complained of some discomfort over his gastrosoleus contacts. On examination, there was a rounded bulge on the anterolateral aspect of the mid distal tibia, approximately 7x7 cm in size, more pronounced on dorsiflexion of the foot (Figure 1). There was a fascial defect palpable with the protruding muscle. At the same time marked tenderness over the gastrosoleus contacts was noted. The remainder of examination of both the lower limbs including neurovascular status was unremarkable. Plain radiographs were unremarkable. Ultrasound or MRI scans were not requested due to obvious clinical diagnosis. Based on the clinical examination, a diagnosis of tibialis anterior muscle hernia was made along with an inflammatory tendinopathy of unknown aetiology of the gastrosoleus.

The patient was referred to physiotherapy initially for gastrosoleus stretches and ultrasound therapy which resolved his posteromedial symptoms. On follow up the symptoms had resolved and the hernia was only symptomatic cosmetically. The patient was thoroughly educated on the benign nature of the condition including the operative and non-operative management options with the accompanying risks.

The patient opted for surgical intervention and underwent a primary repair of the defect under general anaesthesia with a double breasting technique. A 1 Vicryl stitch was used for repair of the defect with 2/0 Vicryl for the fascia and clips for the skin. (Figures 2 and 3).

Figure 2: Intra-operative view of the fascial defect

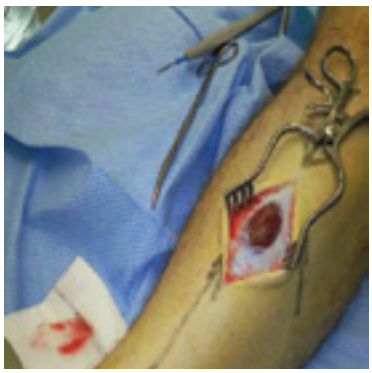
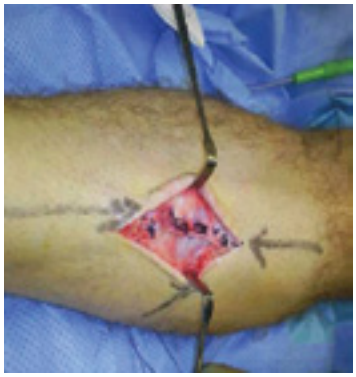


Figure 3: Primary repair of the defect



There were no reported post operative complications and on follow up there was no recurrence of the hernia with the patient being completely asymptomatic and back to work.

Discussion

Muscle herniation through its contained fascial envelope is not an uncommon entity, the majority occurring in the lower limb especially in the leg. Tibialis anterior muscle herniation is also not unheard of and has been described in the orthopaedic, plastic surgery, radiological and dermatological literature [1, 2, 3, 4, 5].

They almost exclusively occur as a result of acute or repetitive traumatic insults. Spontaneous onset tibialis anterior hernia has almost never been reported in the literature before, especially with no history of collagen deficiency disorders. It is thought that the muscle herniates through the fenestrations in the fascia for blood vessels, with a progressive increase in its size.

Generally the asymptomatic hernias are managed conservatively which only requires reassurance and elasticated supports [1]. The symptomatic ones invariably necessitate surgery which includes primary repair as in the case of our patient, fascial grafts, mesh repair and longitudinal fasciotomies [6, 3, 7]. Most important is the fact that these are potentially challenging surgeries due to the difficulty in the closure of the defect and that they all carry significant risks including compartment syndrome, infection, foreign body reactions and recurrence [8, 9].

As there is a potential of permanent disability in the event of a compartment syndrome, it is advisable to consider surgery in symptomatic cases only. It should be avoided if possible for asymptomatic cases and cosmetic reasons and patients should be warned of the potential risks mentioned earlier. This raises an issue of whether every tibialis anterior hernia should be treated and historically the best practice is to be vigilant in offering surgical treatment.

The patient described in this case report was well informed of the potential risks involved and was carefully monitored throughout the post operative phase. We suggest that before operating on these hernias, the best possible clinical option, formulated in conjunction with the informed patient, should be instigated. Furthermore, a surgeon should not only know how to operate, but also know when, and when not to, operate.

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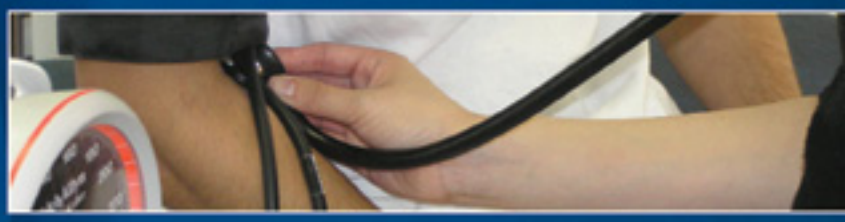

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