Intramuscular myxoma involving the soleus muscle: An uncommon tumour in an uncommon site!
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Abstract
Background: Intramuscular myxomas (IM) are uncommon tumours composed of stellate cells set in a loose myxoid stroma through which course very delicate reticulin fibres. Since the first characterisation of IM as a distinct entity, their presence in different locations in the body has been increasingly reported. While the thigh muscles appear to be the most common site for these benign tumours, only 1 case of an IMM in the soleus muscle has been previously reported.
Case report: We report a case of a right soleal IMM in a young lady whilst presenting the characteristic radiological features noted.
Conclusion: To the best of our knowledge, this is only the second case of an IMM of the soleus muscle reported in literature.
Key words: intramuscular myxoma, soleus muscle

Introduction
Intramuscular myxomas (IM) are uncommon tumours composed of stellate cells set in a loose myxoid stroma through which course very delicate reticulin fibres. [1] Since the first characterisation of IM as a distinct entity, [2] their presence in different locations in the body has been increasingly reported. While the thigh muscles appear to be the most common site for these benign tumours, [2, 3] only 1 case of an IM in the soleus muscle has been previously reported. [2] We report a case of a right soleal IM in a young lady. To the best of our knowledge, this is only the second case of an IM of the soleus muscle reported in literature.

Case Report
A 45 year old lady was referred to us with a lump in her right leg. The lump was asymptomatic and was detected incidentally by the patient, herself. Clinical examination revealed a firm mass measuring 3x2 cm on the lateral aspect of the right leg possibly arising from the calf muscles. An ultrasonography of the lesion was performed which revealed a complex cystic mass measuring 2x1.4x1.4 cm in the lateral head of the right gastrocnemius close to the posterolateral margin of the fibula. To further characterise the lesion, a magnetic resonance imaging (MRI) scan was also performed. The MRI scan demonstrated a rounded, well defined intramuscular cystic-like lesion within the lateral aspect of the soleus muscle with a fat rind around the lesion, especially at the poles [Figure 1]. The lesion was hypointense on T1-weighted imaging and hyperintense on T2-weighted imaging. There was no solid component. The findings were consistent with that of an IM arising from the soleus. Despite the likely benign nature of the lesion, the patient was keen to have the lesion removed and so she underwent an excision of the lesion. Intraoperatively, the lesion was found to be deep seated within the soleus muscle. The lesion was excised with a margin of surrounding muscle except for the surface closely applied to the fibula where it was sharply dissected off from the periosteum. Histopathology was compatible with an IM.

Discussion
IM are uncommon benign tumours with low recurrence [3] potential following excision. Based on the cases reported in literature, these tumours have the highest prevalence in females in the 4th – 6th decade of life. IM may be found in isolation or associated with other similar lesions when forming a part of a syndrome (Albright’s and Mazabraud’s). Although IM have been most commonly reported to occur in the thigh, gluteal region and shoulder girdle, they have also been described in muscles throughout the body, including temporalis and masseter muscles of the head, in the hand and forearm, as well as in the paravertebral muscles.
and intercostal muscles. [2, 3] Whilst there have been cases reported of IM in the gastrocnemius, to date there has been only 1 prior report of such a tumour occurring in the soleus. This was in the original report by Enzinger et al. [2] The soleal IM was found in a 48 year old man who went on to have an amputation for the lesion.

As in the patient reported by us, these lesions tend to be asymptomatic. Occasionally patients may have symptoms arising due to local pressure. [3]

MRI has been described as the most useful radiological modality for investigation of intramuscular lesions to differentiate between intramuscular myxoma and other lesions which may appear similar, such as a ganglion or synovial cysts. [4, 5]

An intramuscular myxoma most commonly appears hypointense on T1-weighted MRI and hyperintense on T2-weighted MRI. It generally has a fluid-like signal intensity, thus appearing as a cyst-like lesion as in the case described here. According to Bancroft et al. [4], one of the most important MRI features of IM is the appearance of a fat rind around the lesion, in particular at the poles of the lesion. [5]

Given the benign nature of IM and low risk of recurrence of IM, Silver et al. [6] have shown excellent local control with local excision. IM need to be differentiated from other similar soft tissue myxoid lesions such as low grade fibromyxoid sarcoma, low grade myxofibrosarcoma and myxoid liposarcoma, which have a malignant potential and a risk of recurrence. [3]

References

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