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Case Report

Lumbar paraspinal intramuscular myxoma: A case report

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ABSTRACT

Background: With an estimated incidence of about 1 case/million patients, paravertebral intramuscular myxomas represent a rare cause of lumbar pain. Rather, they typically occur in the heart and in bone tissues.

Case Description: A 64-year-old female presented with a protracted course of nocturnal lumbar pain that radiated to the anterior aspect of the right thigh accompanied by numbness. She reported a slow-growing right paramedian lumbar mass in the previous months. The magnetic resonance (MR) showed a right lumbar paravertebral intramuscular mass at the L3 level (i.e., 70 × 50 mm) that had well-defined margins, and markedly enhanced with gadolinium. Following gross total "*en bloc*" tumor resection, the patient fully recovered. Pathologically, the myofibroblastic lesion proved to be an intramuscular myxoma without malignant changes.

Conclusion: A 64-year-old female presented with a slow-growing MR-documented right paramedian lumbar L3 mass responsible for proximal right-thigh numbness. Following "*en bloc*" gross total removal of the benign intramuscular myxoma, the patient was asymptomatic.

Keywords: Intramuscular myxoma, Lumbar pain, Paraspinal tumors

INTRODUCTION

Intramuscular myxomas are a rare cause of low back pain that occur with a frequency of 1 in a million patients.[7,9] They are benign masses of mesenchymal origin composed of fibroblasts which lose the ability to produce mature collagen.[3,7] They occur most commonly in the heart and bony tissues (i.e., mandible and the maxilla), but rarely in the large skeletal muscles.[3] Here, we describe how a 64-year-old female presented with an intramuscular paraspinal soft-tissue myxoma and was symptom-free following total resection of the benign lesion.

CASE

Over the last few months, a 64-year-old female had noted a slow-growing right paramedian lumbar mass that was painful to deep palpation, but remained grossly mobile. She had accompanying persistent nocturnal lumbar pain with numbness in the anterior right thigh without any neurological deficits. The lumbar magnetic resonance (MR) showed an ovoid intramuscular L3 paravertebral right-sided mass (i.e. 70 × 50 mm longitudinal X anterior-posterior axes) that was hypointense on T1, and hyperintense on T2-weighted images; it had well-defined margins, and markedly enhanced with gadolinium (i.e., T1-weighted fat-suppression sequences) [Figures 1 and 2]. She underwent a right paramedian lumbar resection that revealed a

Table 1: Review of the eleven cases reported in the literature, including the present case report.

Case	Author	Date	Age/ Gender	Site	Presentation	Country/City
1	Tahmouresie *et al.*[14]	1981	50/M	Thoracolumbar (T11-L1)	Back pain with paraparesis	USA/Brooklyn
2	Kamoun *et al.*[6]	1997	54/F	Lumbar (L3-L4)	Low back pain radiated to lower limb	Tunisia/Tunis
3	Liguoro *et al.*[8]	1999	63/F	Lumbosacral (L5-S1)	Low back pain	France/Bordeaux
4	Guppy *et al.*[5]	2001	80/F	Lumbar (L5)	Low back pain	USA/Chicago
5	Stinchcombe *et al.*[13]	2010	80/F	Lumbosacral (L2-S1)	Low back pain	UK/Sutton-in-Ashfield
6	Rashid *et al.*[12]	2011	70/F	Lumbosacral (L2-S3)	Low back pain	UK/Haywards Heath
7	Ohla *et al.*[10]	2013	57/F	Lumbar (L5)	Low back pain	USA/Boston
8	Choi *et al.*[3]	2015	62/F	Lumbar (L4-L5)	Low back pain radiated to lower limb	South Korea/Incheon
9	Kwon *et al.*[7]	2016	39/F	Lumbar (L1)	Low back pain	South korea/Suwon
10	Al Awadhi *et al.*[2]	2022	76/F	Lumbar (L5)	Low back pain radiated to lower limb	France/Paris
11	Hipólito-Reis *et al.*	2023	64/F	Lumbar (L3)	Low back pain radiated to lower limb	Portugal/Lisbon

M - Male; F - Female

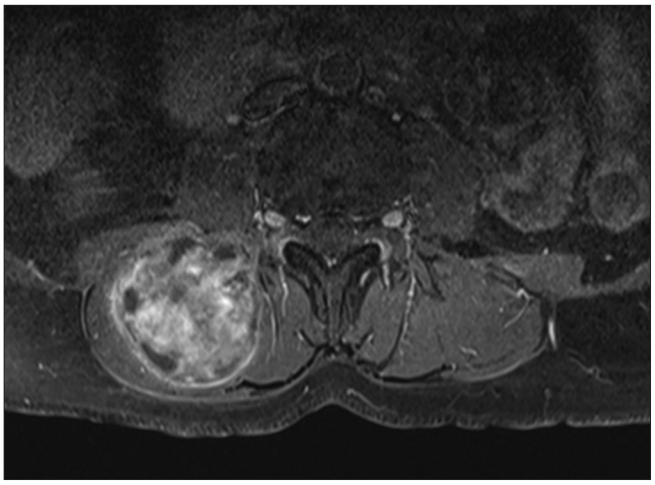

Figure 1: Preoperative axial T1-weighted fat-suppression gadolinium-enhanced magnetic resonance imaging showing the paravertebral right lumbar intramuscular myxoma.

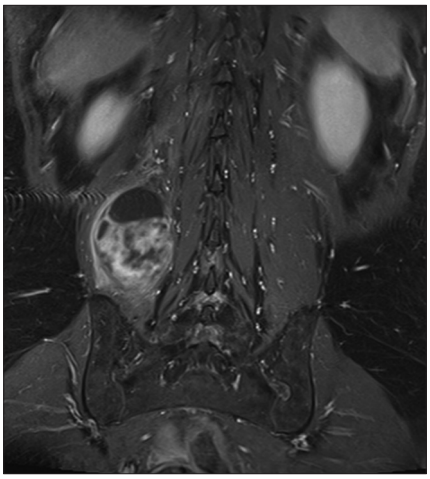

Figure 2: Preoperative coronal T1-weighted fat-suppression gadolinium-enhanced magnetic resonance imaging showing the lesion.

pale and elastic mass with a well-defined plane between itself and surrounding muscle tissue. The tumor was removed "*en bloc*" without incident [Figure 3]. Postoperatively, she demonstrated complete symptom resolution. The pathology revealed a myofibroblastic mass without atypia and findings compatible with the diagnosis of an intramuscular lumbar myxoma.

Figure 3: Macroscopic appearance of the intramuscular myxoma.

DISCUSSION

Intramuscular myxomas are rarely found in the lumbar paraspinal region.[3] We were able to identify 10 similar cases in the literature with the first case dated to 1981.[2,3,5-8,10,12-14] To our best knowledge, this represents the eleventh reported case in the literature [Table 1]. Most patients with these tumors present with low back pain that resolves following total tumor removal.[2,3,5-8,11-13] In six of the 10 previously described cases, the intramuscular myxoma was purely lumbar, as seen in our case.[2,3,5-7,10] In three cases, the lesion was lumbosacral.[8,12,13] One case presented with back pain progressing to paraparesis with the MR showing a

thoracolumbar paraspinal intramuscular myxoma extending to the vertebral canal with spine cord compression.[14] Differential diagnoses for these neoplasms include for the benign lesions, neurinomas, lipomas and neurofibromas, or for malignant tumors, myxoid chondrosarcomas or myxoid liposarcomas.[1,11] The optimal treatment is gross total resection to prevent local recurrence.[4] Interestingly, these lesions do not appear to undergo malignant degeneration or metastatic spread.[3]

CONCLUSION

The most uncommon types of benign soft-tissue myxomas are found in the paraspinal musculature. Here, we presented a 64-year-old female who presented with a slow-growing right-sided L3 paraspinal intramuscular mass responsible for the right thigh pain/numbness that, once removed "*en bloc,*" resulted in complete symptom resolution.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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