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Rapidly Enlarging Giant Intramuscular Myxoma of the Distal Gluteus Maximus during Late Pregnancy

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Learning Point of the Article:

Intramuscular myxoma may exhibit rapid growth during late pregnancy, reach giant size, and mimic a malignant process, thereby creating substantial preoperative diagnostic uncertainty.

Abstract

Introduction: Intramuscular myxoma is a rare benign mesenchymal tumor of skeletal muscle that usually presents as a slowly enlarging, painless mass.

Case Report: We report a giant intramuscular myxoma of the distal gluteus maximus in a 34-year-old woman. The lesion became clinically apparent during the third trimester of her first pregnancy and enlarged rapidly over approximately 6 months. Three months after cesarean delivery, she presented with severe sitting intolerance, difficulty breastfeeding while seated, and burning pain radiating along the sciatic nerve distribution. Magnetic resonance imaging demonstrated an approximately 154 × 155 × 156 mm well-circumscribed intramuscular mass adjacent to the ischium and compressing the sciatic nerve, without osseous destruction; however, its rapid growth and imaging features raised concern for a malignant myxoid soft-tissue neoplasm. A preoperative core needle biopsy showed fibrous and myxoid tissue, with no atypia or malignant cells identified in the sampled material. Complete en bloc excision was performed. Histopathologic and immunohistochemical evaluation confirmed intramuscular myxoma, and the closest surgical margin was 1 cm. The postoperative course was uneventful; symptoms resolved, she was able to continue breastfeeding, and no clinically evident local recurrence was observed during 24 months of clinical follow-up.

Conclusion: This case highlights that a histologically benign intramuscular myxoma may exhibit rapid growth during late pregnancy, reach giant size, and mimic a malignant process, thereby creating substantial preoperative diagnostic uncertainty.

Keywords: Myxoma, pregnancy, buttocks, sciatica.

Introduction

Intramuscular myxoma is an uncommon benign mesenchymal tumor arising within skeletal muscle and typically involving large muscle groups, particularly the thigh and gluteal region [1]. The entity was classically described by Stout [2]. Histologically, it is characterized by hypocellularity, bland spindle or stellate cells, abundant myxoid stroma, scant collagen, and low proliferative activity [1,2]. Complete surgical excision is usually curative, and recurrence is uncommon [3].

Magnetic resonance imaging (MRI) may strongly suggest the diagnosis, but its findings are not specific enough to exclude other deep myxoid soft-tissue tumors, including malignant lesions [4]. Intramuscular myxoma may also occur in association with fibrous dysplasia as Mazabraud syndrome [5]. The present case is noteworthy because the lesion became clinically apparent in late pregnancy, enlarged rapidly to giant size, and caused severe

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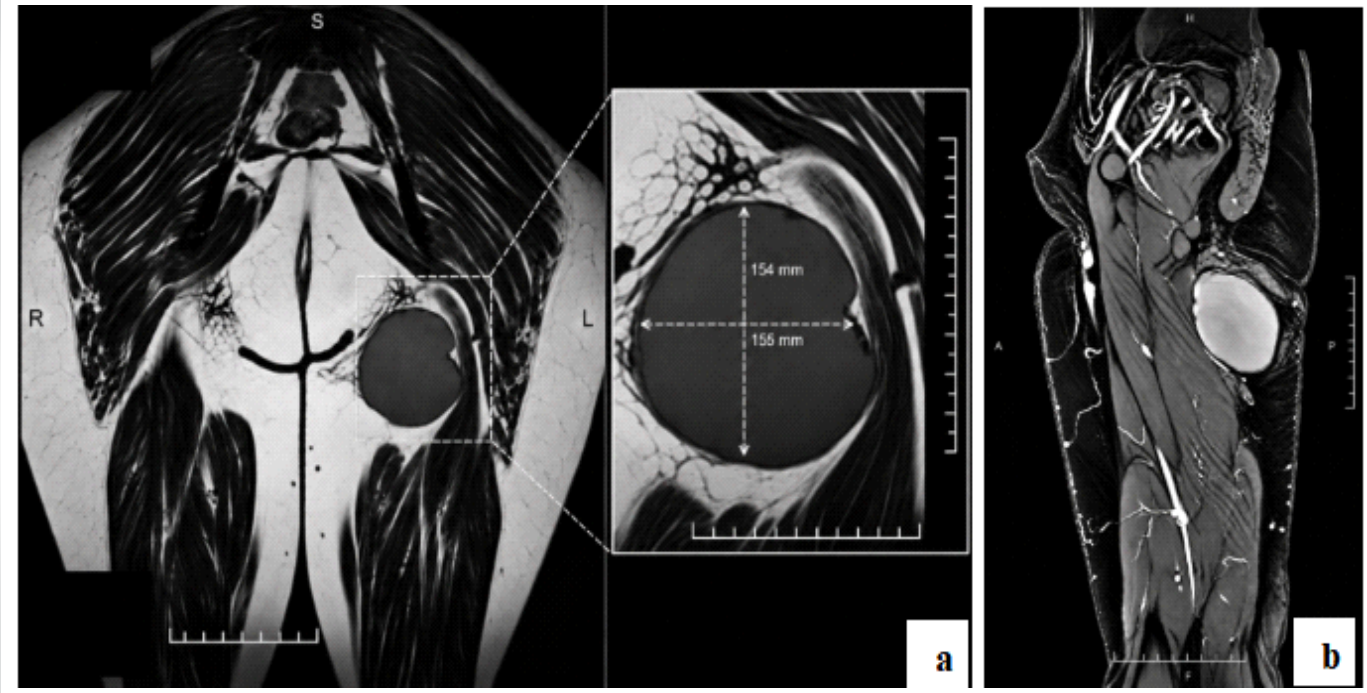


Figure 1: Preoperative magnetic resonance imaging of the left gluteal region. (a) Coronal T1-weighted image demonstrates a well-circumscribed ovoid intramuscular mass in the distal gluteus maximus adjacent to the ischium, with low signal intensity relative to surrounding fat. (b) Sagittal T2-weighted fat-suppressed image confirms the craniocaudal extent of the lesion and its relationship to the gluteal and posterior proximal thigh musculature. No osseous destruction is evident in the images shown.

sitting intolerance with sciatic-type symptoms, thereby mimicking a more aggressive process.

Case Report

A 34-year-old woman presented to the orthopedic outpatient clinic with a left gluteal mass that caused discomfort and pain while sitting. She reported no relevant prior symptoms in this region. Physical examination revealed a firm, mobile, non-tender mass located to the left of the intergluteal cleft and extending toward the posterior proximal thigh. The externally estimated size was approximately 15 × 15 cm, and no overlying skin change was noted.

The patient had delivered a healthy infant by cesarean section 3 months earlier. She reported that she had first noticed a small mass approximately 3 months before delivery, during the third trimester of her first pregnancy, and that it had enlarged rapidly thereafter. At presentation, she was breastfeeding and stated that she could feed her infant only while lying down because sitting was intolerable. She also reported right shoulder pain, which she attributed to prolonged positioning while nursing. During the preceding 10 days, she had developed burning pain radiating from the buttock along the entire lower extremity in the sciatic nerve distribution.

MRI performed at another institution demonstrated an approximately 154 × 155 × 156 mm well-defined intramuscular mass in the left gluteal region adjacent to the ischium, with diffuse subcutaneous fluid accumulation and no osseous destruction. The lesion was reported to lie adjacent to and compress the sciatic nerve. Although the imaging appearance suggested a benign soft-tissue tumor because no contrast

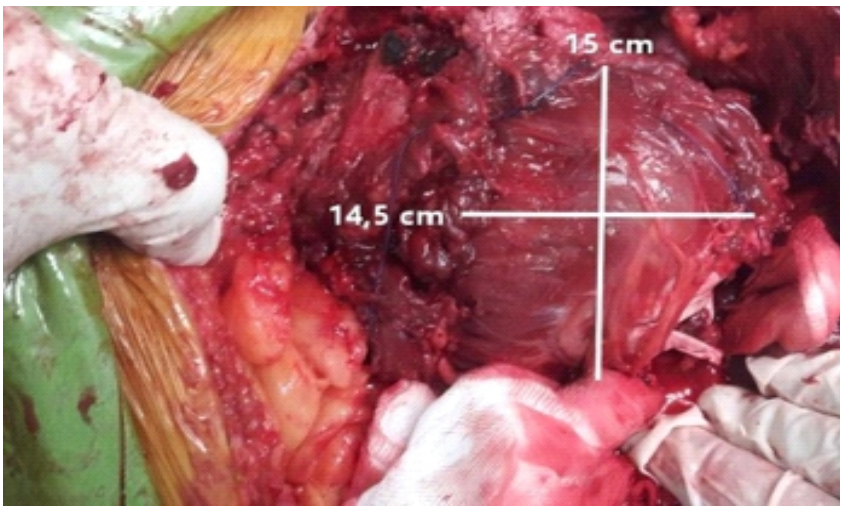


Figure 2: Intraoperative photograph showing the giant well-circumscribed intramuscular gluteal mass during posterior exposure. Complete en bloc excision was performed after identification and protection of the sciatic nerve.

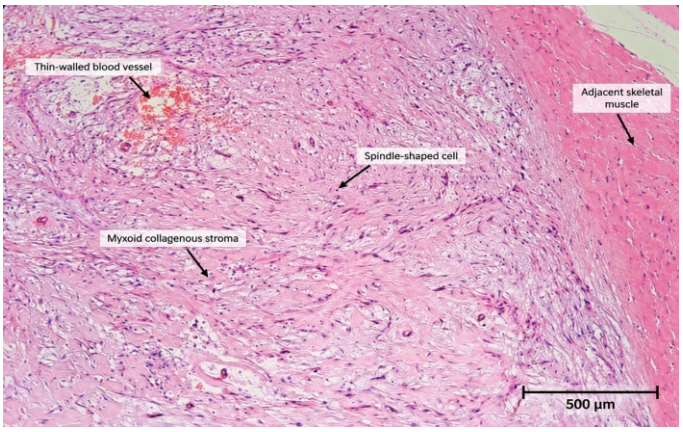


Figure 3: Histopathologic examination of the excised mass. Sections stained with hematoxylin and eosin demonstrate a hypocellular myxoid neoplasm composed of bland spindle cells embedded in abundant myxoid stroma with scant collagen fibers. No significant cytologic atypia or increased mitotic activity is identified. These findings are consistent with intramuscular myxoma. Original magnification: ×100; scale bar: 500 µm.

enhancement was observed, the radiology report recommended exclusion of a malignant mesenchymal neoplasm because of focal degenerative areas (Fig. 1).

A preoperative core needle biopsy was performed; histopathologic examination showed fibrous and myxoid tissue, with no atypia or malignant cells identified in the sampled material. Because of the severity of the patient's symptoms, the radiologic impression of a well-circumscribed, resectable lesion, and the preoperative biopsy findings, complete surgical excision was planned. The patient was placed in the prone position, and the procedure was performed under spinal anesthesia. A longitudinal incision was made, and the subcutaneous tissues and fascia were divided in layers. The sciatic nerve was identified, carefully protected, and gently retracted throughout the procedure. A giant mass adherent to the surrounding musculature was excised en bloc with grossly negative margins (Fig. 2).

Gross pathologic examination revealed a solid brown-gray tumor measuring 155 × 150 × 145 mm in maximal dimensions. The closest distance to the surgical margin was 1 cm. Microscopic examination demonstrated a hypocellular neoplasm composed of bland spindle cells with elongated nuclei embedded in abundant myxoid stroma, with minimal collagen deposition. Immunohistochemical analysis demonstrated focal CD34 positivity, while smooth muscle actin, desmin, S-100, and CD1a were negative. The Ki-67 proliferation index was approximately 1%, indicating low proliferative activity. These findings were consistent with intramuscular myxoma (Fig. 3).

The postoperative course was uneventful. The patient's sitting difficulty and sciatic-type pain resolved, and she was able to continue breastfeeding. She was followed clinically in the orthopedic outpatient clinic for 24 months with interval history taking and local physical examination. No postoperative complications or clinically evident local recurrence were observed during this follow-up period.

Discussion

Intramuscular myxoma is typically a slowly growing benign tumor of large skeletal muscles. Published series report a predominance in middle-aged women, with mean ages ranging from the early 50s to early 60s and lesion sizes generally smaller than in the present case [1,3,4,6]. In contrast, our patient was 34 years old; the lesion became clinically apparent during late pregnancy and demonstrated unusually rapid growth over approximately 6 months, ultimately reaching giant size and resulting in marked functional limitation with sciatic-type pain.

The gluteal location of intramuscular myxoma is common. Previous reports have described gluteal lesions presenting with sciatica-like symptoms or mimicking other deep soft-tissue tumors [7,8,9]. The distinctive feature of the present case is therefore not merely its location, but the combination of late-pregnancy onset, unusually rapid enlargement to giant size, postpartum functional impairment, and symptomatic sciatic compression in a young patient.

From a diagnostic perspective, this case highlights the limitations of imaging. MRI is the most informative preoperative modality for intramuscular myxoma and typically demonstrates a well-circumscribed lesion with low signal intensity on T1-weighted images and high signal intensity on fluid-sensitive sequences, sometimes accompanied by a surrounding fatty rind or adjacent muscle edema [4]. Nevertheless, these findings are not pathognomonic, and the differential diagnosis of a large deep myxoid mass includes myxoid liposarcoma, low-grade myxofibrosarcoma, low-grade fibromyxoid sarcoma, and peripheral nerve sheath tumors [4,6]. In the present case, the rapid enlargement of the lesion and the radiologic recommendation to exclude mesenchymal sarcoma contributed to substantial preoperative diagnostic uncertainty, particularly in distinguishing the lesion from malignant myxoid neoplasms.

The preoperative biopsy showed fibrous and myxoid tissue, with no malignant cells or atypia identified in the sampled material; however, the definitive diagnosis was established on the resection specimen. Histologically, intramuscular myxoma is typically a hypocellular and hypovascular neoplasm composed of bland spindle cells within abundant myxoid stroma, with scant collagen and low mitotic activity [1,10]. The low proliferative index and supportive immunophenotype in our case were compatible with this diagnosis. Recent studies suggest that GNAS alteration analysis may be helpful in diagnostically difficult cases, particularly when tissue samples

are limited; however, it was not required here because the morphology and immunophenotype were characteristic [11]. Intramuscular myxoma may also occur in association with fibrous dysplasia as part of Mazabraud syndrome [5]. However, no fibrous dysplasia or other osseous abnormality was identified in this patient, arguing against that association.

Complete excision remains the treatment of choice, and recurrence is uncommon after adequate resection [3,6]. A recent diagnostic and therapeutic pathway analysis suggested that standardized radiologic follow-up is not routinely required after resection of a histopathologically confirmed intramuscular myxoma [6]. In the present case, because the lesion was completely excised and the diagnosis was confirmed histopathologically, postoperative surveillance was performed clinically. No recurrent symptoms or clinically detectable mass were observed during 24 months of follow-up. Although routine postoperative MRI was not performed and recurrence not detectable by clinical examination alone cannot be excluded with certainty, the clinical course was reassuring.

The temporal association with late pregnancy is clinically noteworthy. Pregnancy-related hand and wrist disorders, particularly carpal tunnel syndrome and de Quervain's tenosynovitis, are well recognized during pregnancy and lactation [12,13,14]. In addition, a histopathologic study of postpartum de Quervain's disease demonstrated myxoid degeneration [15]. Although a direct hormonal or mechanistic relationship cannot be established from a single case, the temporal association raises the hypothesis that pregnancy-related hormonal or extracellular-matrix changes may have contributed to the unusually rapid enlargement observed in this patient. Further clinicopathologic studies are needed to determine whether such changes can influence the growth kinetics of intramuscular myxoma.

Conclusion

This case demonstrates that intramuscular myxoma, although histologically benign, can rarely behave in a clinically alarming manner, presenting in a younger woman as a rapidly enlarging giant gluteal mass during late pregnancy and mimicking a malignant myxoid soft-tissue neoplasm. When MRI demonstrates a well-circumscribed myxoid lesion but the clinical course is unusually aggressive, histopathologic evaluation remains essential for definitive diagnosis. Complete excision can relieve symptoms and provide durable local control.

Clinical Message

Intramuscular myxoma may rarely present in a young woman as a rapidly enlarging giant gluteal mass during late pregnancy. MRI may strongly suggest the diagnosis, but its findings are not specific enough to exclude other deep myxoid soft-tissue tumors, including malignant lesions. Histopathologic evaluation remains essential for definitive diagnosis, and complete excision can relieve symptoms and provide durable local control.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given the consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil **Source of support:** None

References

1. Hashimoto H, Tsuneyoshi M, Daimaru Y, Enjoji M, Shinohara N. Intramuscular myxoma. A clinicopathologic, immunohistochemical, and electron microscopic study. Cancer 1986;58:740-7.

2. Stout AP. Myxoma, the tumor of primitive mesenchyme. Ann Surg 1948;127:706-19.

3. Baltu Y, Arikan SM, Dolen UC, Uzun H, Alkan BI, Aydin O. Intramuscular myxoma: Clinical and surgical observation notes on eleven cases. Int Orthop 2017;41:837-43.

4. Bancroft LW, Kransdorf MJ, Menke DM, O'Connor MI, Foster WC. Intramuscular myxoma: Characteristic MR imaging features. AJR Am J Roentgenol 2002;178:1255-9.

5. Kabukcuoglu F, Kabukcuoglu Y, Yilmaz B, Erdem Y, Evren I. Mazabraud's syndrome: Intramuscular myxoma associated with fibrous dysplasia. Pathol Oncol Res 2004;10:121-3.

6. Reiter A, Trumm K, Ballhause TM, Weiss S, Frosch KH, Korthaus A, et al. Diagnostic and therapeutic pathways of intramuscular myxoma. Diagnostics (Basel) 2022;12:1573.

7. Islam S, Ramsingh C, Bheem V, Harnarayan P, Naraynsingh V. Intramuscular myxoma of the gluteal region presenting as sciatica-like symptoms. Int J Curr Res 2017;9:52591-4.

8. Yamashita H, Endo K, Takeda C, Teshima R, Osaki M, Yoshida H. Intramuscular myxoma of the buttock mimicking low-grade fibromyxoid sarcoma: Diagnostic usefulness of MUC4 expression. Skeletal Radiol 2013;42:1475-9.

9. Maslehaty H, Barth H, Mahvash M, Hugo HH, Mehdorn HM. Rapid growing intramuscular myxoma mimicking a peripheral nerve sheath tumor. J Neurol Res 2011;1:69-70.

10. Nielsen GP, O'Connell JX, Rosenberg AE. Intramuscular myxoma: A clinicopathologic study of 51 cases with emphasis on hypercellular and hypervascular variants. Am J Surg Pathol 1998;22:1222-7.

11. Libbrecht L, Vanden Bempt I, Schubert T, Sciot R, Galant C. Next generation sequencing for GNAS uncovers CD34 as a sensitive marker for intramuscular myxoma. Ann Diagn Pathol 2019;43:151409.

12. Ablove RH, Ablove TS. Prevalence of carpal tunnel syndrome in pregnant women. WMJ 2009;108:194-6.

13. Afshar A, Tabrizi A. Pregnancy-related hand and wrist problems. Arch Bone Jt Surg 2021;9:345-9.

14. Bae KJ, Baek GH, Lee Y, Lee J, Jo YG. Incidence and risk factors for pregnancy-related de Quervain's tenosynovitis in South Korea: A population-based epidemiologic study. Clin Orthop Surg 2023;15:145-52.

15. Read HS, Hooper G, Davie R. Histological appearances in post-partum de Quervain's disease. J Hand Surg Br 2000;25:70-2.

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