

When Recurrent Anterior Uveitis Unmasks a Liposarcoma: A Paraneoplastic Manifestation

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Abstract

Case Report

Background: Anterior uveitis is a common inflammatory ocular condition, most often idiopathic or associated with autoimmune or infectious diseases. Its association with solid tumors is rare and may represent a paraneoplastic phenomenon. **Case Presentation:** We report the case of a 51-year-old man with no significant medical history who presented with recurrent episodes of unilateral anterior uveitis. Despite appropriate topical treatment, the uveitis relapsed several times, prompting an extensive etiological work-up. Clinical examination incidentally revealed a painless soft-tissue mass in the thigh. Imaging studies showed a large deep-seated tumor, and histological analysis confirmed the diagnosis of liposarcoma. The patient underwent surgical resection followed by adjuvant radiotherapy. After oncological treatment, no further episodes of uveitis were observed. **Conclusions:** This case highlights the importance of considering an underlying neoplastic process in patients with recurrent or unexplained uveitis. A thorough systemic examination may reveal occult malignancies, and appropriate treatment of the underlying tumor can lead to resolution of ocular inflammation.

Keywords: Anterior Uveitis, Paraneoplastic Manifestation, Liposarcoma, Soft Tissue Sarcoma, Case Report.

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INTRODUCTION

Anterior uveitis is the most frequent form of uveitis and is commonly idiopathic or associated with systemic inflammatory, autoimmune or infectious diseases [1–3]. In contrast, paraneoplastic uveitis is rare and represents an immune-mediated ocular manifestation of an underlying malignancy. Solid tumors are uncommon causes of paraneoplastic uveitis, and diagnosis is often delayed due to the absence of specific systemic symptoms. Soft tissue sarcomas, including liposarcomas, are rare malignant tumors that may remain clinically silent for a long time, particularly when painless and deeply located [4, 5]. We report a case of recurrent anterior uveitis that led to the incidental discovery of a thigh liposarcoma, illustrating the importance of a comprehensive clinical evaluation in recurrent ocular inflammation.

CASE PRESENTATION

A 51-year-old man with no significant past medical history was referred to the ophthalmology department for recurrent episodes of anterior uveitis

affecting the right eye. He reported several episodes over a period of months, characterized by ocular pain, redness and photophobia. Each episode responded partially to topical corticosteroids and cycloplegic agents but recurred after treatment tapering.

Ophthalmologic examination during flare-ups revealed signs of non-granulomatous anterior uveitis, including conjunctival hyperemia, anterior chamber cells and flare. There were no posterior segment abnormalities. The contralateral eye was normal. Intraocular pressure was within normal limits.

Given the recurrent nature of the uveitis, an extensive etiological work-up was performed. Laboratory investigations, including inflammatory markers, autoimmune screening (antinuclear antibodies, HLA-B27), and infectious serologies, were unremarkable. There were no clinical features suggestive of spondyloarthritis, sarcoidosis or systemic infection.

During a comprehensive physical examination, a painless, firm mass was incidentally discovered in the

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patient's thigh (figure 1). The patient had not noticed the mass and reported no local pain, trauma or functional impairment. Magnetic resonance imaging of the thigh revealed a large deep-seated soft tissue mass with imaging features suggestive of a malignant tumor (figure 2,3). A biopsy was performed, and histopathological examination confirmed the diagnosis of liposarcoma.

The patient was referred to the oncology and surgical teams. He underwent complete surgical excision of the tumor, followed by adjuvant radiotherapy. The postoperative course was uneventful. Notably, after initiation of oncological treatment, no further episodes of anterior uveitis occurred during follow-up.



Figure 1: Clinical photograph showing a painless right thigh mass

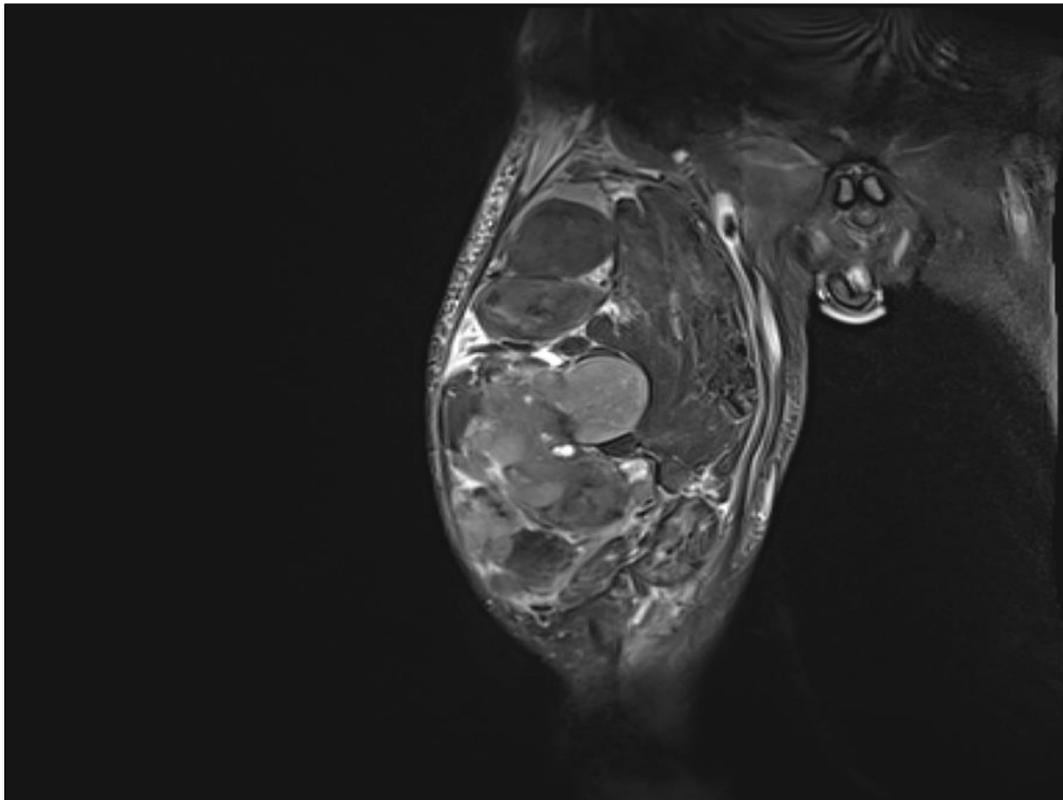


Figure 2: Coronal T2-weighted MRI of the right thigh showing a well-circumscribed oval intramuscular mass in the anterior compartment, involving the vastus lateralis and vastus medialis muscles

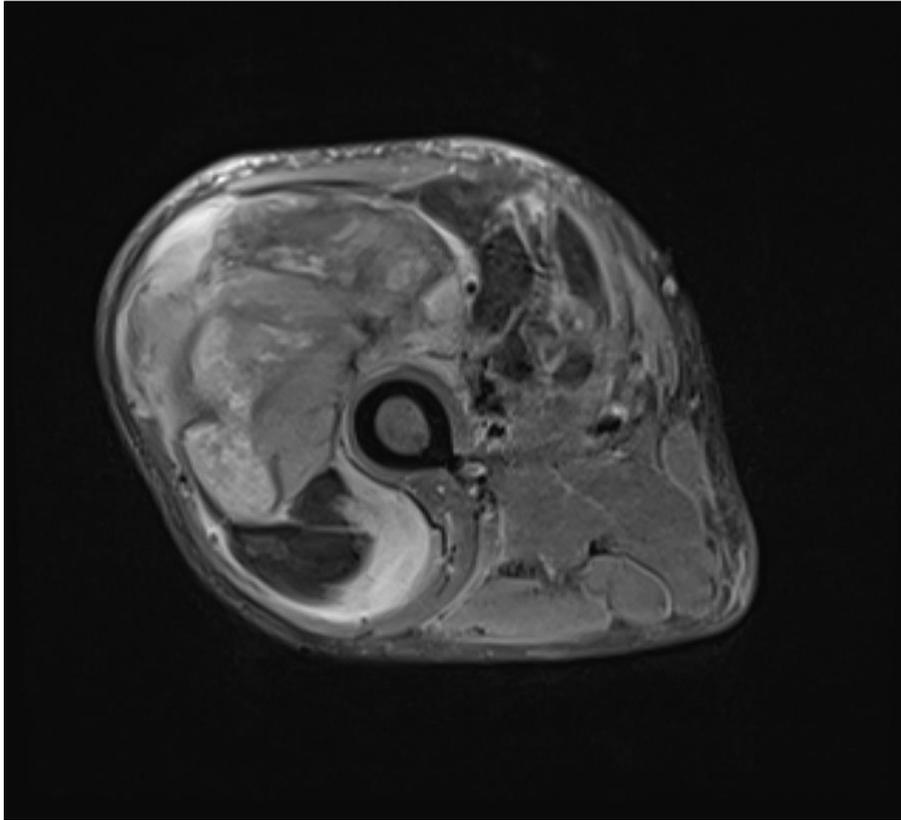


Figure 3: Axial T2-weighted MRI of the right thigh showing a well-circumscribed oval intramuscular mass in the anterior compartment, involving the vastus lateralis and vastus medialis muscles

DISCUSSION

Paraneoplastic syndromes are remote effects of malignancies mediated by immune or hormonal mechanisms rather than direct tumor invasion or metastasis [6]. Ocular paraneoplastic manifestations are rare and may involve various structures of the eye, including the retina, optic nerve and uveal tract [6]. Uveitis as a paraneoplastic manifestation is uncommon and often poses a diagnostic challenge.

Recurrent anterior uveitis is most frequently idiopathic or associated with autoimmune conditions such as spondyloarthritis or inflammatory bowel disease [1, 2]. However, in cases of unexplained or treatment-resistant uveitis, less common etiologies, including malignancy, should be considered. The pathophysiology of paraneoplastic uveitis is thought to involve immune cross-reactivity between tumor antigens and ocular tissues, leading to persistent or recurrent inflammation [6].

Liposarcoma is one of the most common types of soft tissue sarcoma in adults, typically arising in the deep soft tissues of the extremities [7, 8]. These tumors may remain asymptomatic for long periods, especially when painless, and are often discovered incidentally [4]. To our knowledge, the association between liposarcoma and anterior uveitis is extremely rare, with only isolated reports of sarcoma-related paraneoplastic ocular inflammation.

In the present case, the absence of identifiable inflammatory or infectious causes, the recurrent nature of the uveitis, and its resolution after treatment of the underlying tumor strongly support a paraneoplastic mechanism [6]. This observation underscores the importance of a thorough general physical examination in patients with recurrent uveitis, as incidental findings may provide crucial diagnostic clues.

Management of paraneoplastic uveitis relies primarily on treatment of the underlying malignancy [9]. While topical or systemic corticosteroids may provide temporary control of ocular inflammation, definitive resolution often requires oncological treatment [3-9]. In our patient, surgical resection and radiotherapy resulted in sustained remission of uveitis.

CONCLUSION

Recurrent anterior uveitis may rarely represent a paraneoplastic manifestation of an underlying malignancy. This case illustrates that painless and clinically silent tumors, such as soft tissue liposarcoma, can be revealed through ocular inflammatory disease. Clinicians should consider a comprehensive systemic evaluation, including careful physical examination, in patients with recurrent or unexplained uveitis. Early identification and treatment of the underlying tumor may lead to resolution of ocular symptoms and improve overall prognosis.

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