Case Report

COEXISTENT CELLULITIS AND MYOSITIS PRESENTING WITH LEFT ILIAC FOSSA PAIN

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Absract
Cellulitis is a bacterial skin infection affecting the dermis and subcutaneous tissues, while myositis is characterized by skeletal muscle inflammation. These are two different conditions which often occur independently. Their co-occurrence, however, poses diagnostic challenges due to overlapping symptoms and potential systemic complications. This report highlights the case of a 65-year-old female presenting with cellulitis and myositis. This case shows the diagnostic complexities which can occur and emphasizes the importance of a multidisciplinary approach.

Keywords
Cellulitis, Myositis, Idiopathic Inflammatory Myopathies, Polymyositis

Introduction

Cellulitis is a common bacterial condition involving the dermis and subcutaneous tissues, while myositis is a less frequent condition characterized by inflammation of skeletal muscle. Myositis can arise due to autoimmune causes, infectious causes or drug-induced causes. It is often associated with systemic diseases also. (1,3,6) The overlap between these conditions complicates diagnosis due to shared symptoms, including localized pain, swelling and inflammation. Diagnostic evaluations, including laboratory tests and imaging, play a crucial role in differentiating these conditions. (1,5) This case report explores the presentation, diagnosis, and management of a patient with coexisting cellulitis and myositis, highlighting the importance of timely intervention in achieving a favorable outcome.

Case Summary

A 65-year-old postmenopausal woman from Patiala presented to the emergency department on November 10, 2024, with acute pain localized to the left iliac fossa. The pain which began one day ago was accompanied by high-grade fever, chills, rigor and one episode of vomiting. The patient denied changes in bowel or bladder habits and reported normal stool patterns. Her medical history revealed no prior surgeries, chronic illnesses or any similar episodes in the past.

On examination, the patient was febrile but hemodynamically stable. Inspection of the abdomen revealed visible erythema over the left lower quadrant without scars, visible vessels or sinuses. Palpation confirmed tenderness, localized swelling and overlying warmth in the left iliac fossa. There was no crepitus or palpable lymphadenopathy. Gynecological examinations, including per speculum and per vaginal assessments revealed no significant findings.

Figure 1: Visible erythema seen in the lateral side of the abdomen in the left side.

Laboratory investigations revealed elevated inflammatory markers, with an erythrocyte sedimentation rate (ESR) of 120 mm/hour and a positive C-reactive protein (CRP). Imaging studies provided further insight. An ultrasound of the abdomen showed edema of the skin and subcutaneous tissues in the left inguinal region along with subcentimetric lymph nodes. A contrast-enhanced CT scan conducted on November 12 confirmed the presence of bulky and edematous abdominal muscles on the left side, with stranding in the surrounding subcutaneous fat. Enlarged lymph nodes were observed in the inguinal and para-aortic regions, the largest measuring 14.2 × 26.3 mm. The imaging findings were consistent with cellulitis and myositis.

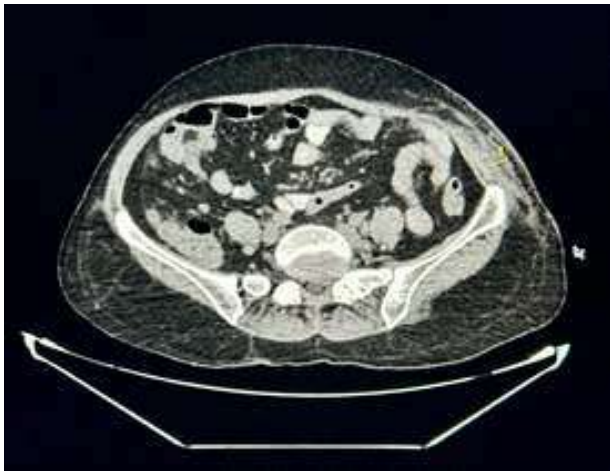

Figure 2: CT Scan image of the patient showing increased thickness of the anterior abdominal wall muscles in the left side (thickness of 1 cm marked in the image)

The patient was managed conservatively. She was administered intravenous antibiotics and analgesics, along with intravenous fluids to maintain hydration. Regular monitoring of her vital signs and inflammatory markers was conducted. The patient's condition gradually improved, with a marked reduction in abdominal tenderness and erythema.

Discussion

Cellulitis and myositis occurring together is a rare presentation and is quite a significant diagnostic challenge since the two have overlapping clinical features. Due to the similar presentation like local pain, erythema and swelling, and systemic evidence of inflammation including fever and elevated inflammatory indices. The pathophysiology of myositis involves complex interactions between immune cells and muscle tissues. In dermatomyositis, immune complexes and complement activation result in vascular damage, whereas in polymyositis and immune-mediated necrotizing myopathy, direct cytotoxicity mediated by T cells leads to muscle injury. (3,6) These processes are frequently compounded by systemic inflammation, as evidenced by elevated cytokines such as interleukin-6 and tumor necrosis factor-alpha, which also contribute to overlapping features with cellulitis. (3,6) The overlapping inflammatory and infectious profiles of cellulitis and myositis necessitate comprehensive diagnostic evaluations, including laboratory tests for creatine kinase (CK) levels and autoantibodies. (1,5,6) Management of coexisting cellulitis and myositis require a dual focus on infection control and inflammation. Standard treatment for cellulitis involves antibiotics, whereas myositis often necessitates immunosuppressive therapies, including glucocorticoids and methotrexate. (3,6) Recent advancements in biologic therapies targeting specific immune pathways, such as cytokines and B cells, offer promising alternatives for refractory cases. (3,6)

Imaging studies, especially CT scan, was central in assessing the extent of involvement and diagnosis. The management of these cases involves treating infection as well as controlling inflammation. For cellulitis, antibiotics remain the main mode of therapy, while for myositis, the use of immunosuppressive regimes including corticosteroids and Methotrexate is common. (3) In this case the patient's condition improved with intravenous antibiotics, demonstrating that the component of infection was the major pathology. Even so, it is important to observe for signs of progressive muscle involvement or the development of systemic complications because if diagnosis and/or treatment is not done in time, extreme situations such as sepsis or chronic damage to the muscles may occur. (5)

Accurate targeting of immune mediated processes with biologic therapies such as cytokine inhibitors and B-cell depletion therapies has provided some positive outcomes in cases of myositis that are resistant to conventional management. (3,6) Although they were not necessary in this instance, these are helpful options for patients who present with more severe or treatment resistant lesions.

Conclusion

This case highlights the diagnostic challenges associated with coexistent cellulitis and myositis. Early recognition, supported by detailed imaging and laboratory evaluations, facilitated an accurate diagnosis and effective conservative management. The patient's favorable outcome underscores the importance of timely intervention in preventing complications.

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