

Pyomyositis in a HIV Positive Patient

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Abstract

A Human Immunodeficiency Virus positive patient was referred to us to rule out polymyositis. Clinical examination revealed warm, indurated and tender swelling in the muscle plane at multiple sites. Ultrasonography revealed fluid collection in the muscle plane. Needle aspiration yielded pus and culture showed growth of staphylococcus aureus. The diagnosis of pyomyositis was made. The pus was drained and appropriate antibiotics were instituted.

Key Words

Pyomyositis, HIV

Introduction

The clinical spectrum of diseases associated with Human Immunodeficiency Virus (HIV) infection is wide and various muscle diseases are reported. We report a case of pyomyositis at multiple sites in a HIV positive patient which is an uncommon manifestation.

Case Report

A 27 year old male, a truck driver was referred to us to rule out polymyositis. He presented with a history of fever, pain in both thighs and upper arms of one week duration and swelling in the back, right upper arm and both thighs of three days duration. He was unable to lift his upper arms and it was difficult to get up from the sitting posture. He gave history of unprotected contact with multiple commercial sex workers. He did not receive blood transfusion and was not an intravenous drug addict.

On examination the patient was febrile, anemic and not jaundiced. He had swelling over both thighs, both upper arms and left scapular area which were diffuse,

warm, indurated and tender (Fig 1). The exact plane of the swelling could not be made out due to severe pain..

Investigations revealed: Hemoglobin-8.5gm%, WBC count-5500/c.mm, differential count-P85, L15, ESR-140mm/1hr, blood sugar-108mg%, blood urea-18mg%, SGOT-65IU/L, SGPT-53IU/L, SAP-140IU/L, serum.bilirubin-0.9mg% and serum CPK-164IU/L. Urine examination showed no albumin, sugar and myoglobin. Blood culture showed no growth; ELISA for HIV was positive (done twice with different kits).

Ultrasonographic examination showed ill defined, hypo-echoic region in both thighs and upper arms in the muscle plane, suggestive of fluid collection. X-ray of thighs showed soft tissue swelling with normal bone. Needle aspiration of the swelling over right thigh yielded pus and pus culture showed growth of staphylococcus aureus which was sensitive to cloxacillin, ciprofloxacin and amikacin. Patient was treated with incision and drainage and with parenteral antibiotics (cloxacillin and amikacin).

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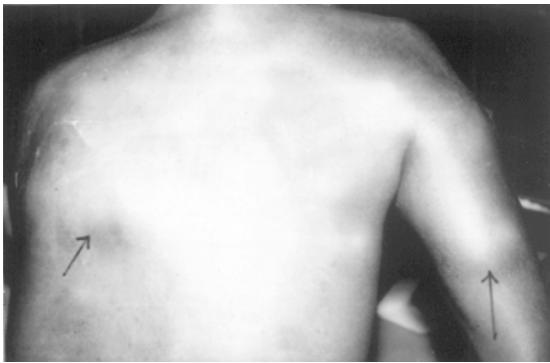


Fig. 1. Photograph showing swellings over right upper arm and left scapular area.

Discussion

A variety of rheumatic manifestations have been reported in HIV infection. Joint diseases include arthralgia, painful articular syndrome, HIV associated arthritis, reactive arthritis, psoriatic arthritis and undifferentiated spondyloarthropathy. Muscle diseases like myalgia, polymyositis and pyomyositis have been reported. Diffuse infiltrative lymphocytosis syndrome and vasculitis of all sizes of blood vessels are documented (1).

Pyomyositis involves the formation of abscess in striated muscle with predilection for the large muscle masses of the body which are normally resistant to bacterial invasion. Multiple lesions in 12% to 43% of cases have been described (2). Pyomyositis is rare except in malnourished or immunocompromised state like diabetes mellitus, Felty's syndrome, leukaemia and HIV infection. Pyomyositis is a rare manifestation in HIV infection and it is mainly reported from Africa and India (1).

Clinical manifestations of pyomyositis are classified into three stages (2) :-

1) Invasive stage:- Pain is localized to one muscle group, with induration and low-grade fever. Aspiration of the muscle does not yield pus.

2) Suppurative stage:- Pain, fever and edema of the affected muscle. Aspiration of muscle reveals pus.

3) Late stage:- The patient appears toxic. A fluctuant abscess may be present and entire muscle may be

necrotic. The patient in this stage is at risk for fulminant septicemia and death.

Studies have identified tropical climate, trauma to muscle, parasitic infestation, viral infection and nutritional deficiencies as risk factors for the development of pyomyositis. Amongst the viral infection, HIV and coxsackie B virus are important (1).

Staphylococcus aureus is the organism usually responsible for this disease. Other organisms like *Streptococcus pyogenes*, *Salmonella enteritidis*, *Mycobacterium tuberculosis*, *Nocardia* and *Cryptococcus* are implicated in some cases (3).

Blood investigation may show mild to moderate leucocytosis with eosinophilia. Neutrophils of HIV positive patients often show chemotactic and oxidative dysfunction with a decreased ability to fight staphylococcal infections. Ultrasonogram and MR imaging are useful in the localization of pus in the muscle. MR imaging is especially useful in clinical stage I and II, where the condition may be mistaken for cellulitis, muscle tear, haematoma, polymyositis, thrombophlebitis and sarcoma (1).

In the early pre-suppurative stage, treatment with antibiotics will abort the bacterial invasion and results in resolution. In the later stages and in the unresolved early stage removal of pus either by needle aspiration or open surgical drainage is required. Awareness of this condition, early recognition and prompt treatment would help us to successfully manage pyomyositis in a tropical country like ours.

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