TROPICAL PYOMYOSITIS

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Introduction

Tropical pyomyositis is the primary abscess of the skeletal muscles usually due to *Staphylococcus aureus*. As the name implies, it is seen in the tropics, although few cases have been reported from temperate region. The first two reports came from France and Brazil 135 years ago [1]. More than 200 cases have thereafter been described, mainly from Africa and South America. In India, 48 cases have been reported from a centre at Varanasi [2,3], besides isolated case reports elsewhere. In the following case report, I describe a patient who presented with classical picture and discuss the role of ultrasound in management of such a case.

Case Report

A 24-year-old soldier presented with complaints of fever and pain to the right thigh and left elbow of 3 days duration. The fever was of moderate grade, continuous, not associated with chills or rigors. he was unable to walk due to the pain and kept his left elbow in flexed position. Patient did not suffer from diabetes and denied any history of recent furunculosis or trauma. He was taking Imipramine for depressive disorder. On examination, the patient was well built and nourished. He had fever (102.8°F) and tachycardia. The blood pressure was normal. Right thigh was swollen, red, warm and acutely tender. Extension of left forearm was markedly restricted due to pain, although the elbow joint was normal. There was no lymphadenopathy, pallor or clubbing. Systemic examination was unremarkable. The haemoglobin was 14gm/dl; total leucocyte count 17000/cmm; differential count; N77, L10, E12, M01, B0 and ESR 45 mm fall in 1st hour. Peripheral blood smear showed polymorphonuclear leucocytosis with eosinophilia. The absolute eosinophil count was 1650/cmm. Blood sugar, urea, creatinine, urinalysis, electrocardiogram and chest radiograph were normal. Radiograph of the right thigh did not reveal any evidence of osteomyelitis. Sonography of the right thigh and left arm were normal. Screening test for HIV infection was negative. Patient was given parenteral Cloxacillin 1 gm 6 hourly and Amikacin 250 mg 8 hourly, after dispatching the blood for culture. An ultrasound examination of the right thigh was repeated after 48 hours. It revealed a deep-seated collection in the adductor compartment. Needle aspiration of the collection under ultrasound guidance was done and 30 ml of thick creamy pus was aspirated. Gram stain pus showed gram-positive cocci in clusters and *Staphylococcus aureus* was isolated from culture. The blood culture was however sterile. He became afebrile after 96 hours and the swelling and tenderness gradually subsided. Amikacin was discontinued after 7 days while

cloxacillin was given for two weeks. Patient made an uneventful recovery and follow-up did not reveal any residual contracture or deformity.

Discussion

Tropical pyomyositis commonly affects males in the second decade of life. Large muscles of trunk and lower limbs are usually affected. The right side may be involved more often than the left. There is a history of preceding trauma to involved muscles in 20% of patients [4]. Although the exact pathophysiology remains elusive, many factors like immunodeficiency [5], preceding viral infection, malnutrition and nematode infestation have been implicated. Clinical course of disease has three stages. In the invasive stage there is fever and myalgia. The suppurative stage is heralded by localization of muscle swelling and tenderness. Majority of the patients seek attention in this stage of the disease. If untreated, patients progress into the late stage characterized by hectic fever, sepsis and its complications. Multiple abscesses are seen in 16-90% of cases [2,3,6]. In the study by Singh et al Quadriceps and Glutei were the two common muscle groups involved. Investigations reveal polymorphonuclear leucocytosis, although muscle enzymes are rarely elevated. Needle aspiration of the pus is an easy method of confirming the diagnosis. Ultrasound examination is useful in demonstrating the progress of pyomyositis and to ascertain the time and site of needle aspiration [7]. Gallium scintigraphy may be useful in an occasional case to determine the extent of disease [8]. *Staphylococcus aureus* is the most common organism isolated from pus, other organisms being *S. Pneumoniae*, *H. Influenzae*, *E. Coli* and *Pseudomonas*. Blood culture is positive in a meagre 5% of patients. Complications occur in 50% of patients, myopericarditis and pleuritis being the commonest. The disease has to be differentiated from muscle haematoma, thrombophlebitis, trichinosis, guinea worm infestation and rhabdomyosarcoma. Early institution of appropriate antibiotic (Cloxacillin) for a period of 10-14 days with or without surgical drainage is effective in all

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cases. Residual muscle contractures have been reported but are uncommon.

This case has been presented to highlight the usefulness of serial ultrasound examination in diagnosis and management of Tropical pyomyositis.

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