RESEARCH PAPER | Medical Science | Volume : 5 | Issue : 5 | May 2015 | ISSN - 2249-555X

Tropical Pyomyositis

KEYWORDS: TROPICAL PYOMYOSITIS

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ABSTRACT *We report an immunocompetent young boy presented with acute arthritis , developed multiple abscesses in the muscles ,the recovery was complete due to early recognition and prompt treatment*

INTRODUCTION

Pyomyositis is a purulent infection of skeletal muscle which occurs without penetrating trauma or spread from contagous septic focus . The disease is common in tropics and is also known as pyomyositis , suppurative myositis or tropical myositis .

The abscess may be single or multiple involving large bulky muscles. Definitive etiology of this condition remains uncertain, a recent review suggest that bacterial infection might be secondary to infection with an unidentified primary pathogen.

In 1947 Traquir reviewed the history of pyomyositis and emphasized that it is endemic throughout the tropics , but occasional cases have been recognised in temporate region among person who have been in tropics, some of these cases had some immunocompromised disease Present case is reported because of the paucity in Indian literature.

CASE REPORT

A 15 year old school going boy was admitted to hospital for high grade fever , pain in left elbow and right ankle joint for 5 days duration .

The patient was alright 7 days ago when he started getting body ache and fever which was treated by general practitioner with analgesics and antipyretics .

Two days later he developed arthralgia , high grade fever and was referred to this hospital with suspicion of septicemia .

There was no history of trauma , drug consumption or any systemic illness.

On examination there was mild edema around the left elbow and right ankle joint. There was local signs of acute inflammation on the left triceps and biceps and right gastronemius muscle , fluctuation test was positive.

The patient was febrile and had hypotension. There was severe anaemia and mild icterus. Examination of lung showed bilateral crepts and liver was enlarged two centimeter below costal margin. The systemic examination otherwise revealed no abnormality.

After correcting the hypotension with fluids and blood transfusion the patient was subjected to battery of investigations. His haemoglobin was 6 gm% there was polymorphonuclear Leucocytosis , urine analysis was normal.

X ray Chest revealed bilateral extensive infiltrates. Diagnostic needle aspirate from muscle swelling revealed frank pus, Gram staining was negative , however , the culture of aspirate grew klebsiella pnemoniae susceptible to ceftriazone , cefazonine , cephalosporine and resistant to ampicillin , tetracycline ,ciprofloxacillin , gentamycin and cotrimozole. The blood and urine culture was sterile.

Renal function were altered (Bl. urea 80 mg/dl , Sr. creatinine 1.7 Mg/dl) The liver function tests were deranged (sr bilirubin 4.1 mg /dl, SGOT 75 IU, SGPT 66 IU , sr alkaline phosphatase 58 KAU)

The hemolytic fraction were negative, serum was negative for HIV antibodies by ELISA technique. Ultrasonography of the abdomen revealed mild hepatomegaly and there was minimal fluid in Morrisons pouch, USG Examination of the muscle revealed intramuscular abscess.

Patient was treated with cefoperazone (magnamycine) 200 mg/kg 8 hourly, cefotaxime sodium (taxim) 2 gm 8 hourly and chloromycetin 1 gm 8 hourly for 15 days.

The muscle swelling subsided, the biochemical abnormalities reverted to normal and patient recovered completely within 5 weeks.

The Patient was reviewed after 6 months which revealed no evidence of contracture of muscle.

DISCUSSION

Tropical myositis may be present as subacute or acute illness with high grade fever and symptoms of toxaemia and the clinical course may be identified as invasive, supperative and late stage.

In the invasive state there is intense interstitial oedema. The second phase of suppuration is characterised by apperance of pleomorphic inflammatory cell , infiltrate may

Volume : 5 | Issue : 5 | May 2015 | ISSN - 2249-555X

be predominantly mononuclear. In the late stage of muscle fibres show clear evidence of necrosis with phagocytosis going onto regeneration.

The organisms grow from 285 positive cultures of pus from pyomyositis revealed staph aureus (93%) streaptococci (3%) pneumococci (1%) Gram negative bacilli (1 %) and Mixed growth of coliform, proteus or micrococci (2%).

It is Uncertain whether the organism are primary pathogens or secondary invader. The source of infection is multifarious, spread of organisms from an infected overlying minor skin wound probably being the most important, however the infection may also be established by direct spread from underlying osteomyelitis or it may be blood borne from the distant focus.

Laboratory finding include leucocytosis and the blood culture may be positive. Aspiration of the area with large needle.

Gram staining of pus and bacterial culture may be diagnostic. When needle aspiration is unrewarding ultrasonography guided aspiration may be helpful.

The condition needs to be differentiated from haematoma, septic arthritis , osteomyelitis, deep vein thrombosis, appendicitis cellulitis or muscle tumour. When the skin becomes inflammed, the condition may simulate superficial cellulitis however muscle pain before illness often points to diagnosis.

Drainage of pus with debridement of necrotic muscle is required. If ultrasound or CT imaging facilities are available percutaneous catheter drainage may suffice. Effective anti microbial agents given in time, doses and duration avoids complication.

Complication may develop in 50% cases which include pancarditis, pericardial effusion, pleural effusion or empyema.

Brain abscess, septic arthritis, anaemia and renal failure due to myoglobinuria may occur. The impairment of renal function in our patient might be due to pre renal azotemia and toxaemia.

Investigation in the case presented did not reveal metastatic abscesses. Awareness of entity of pyomyositis in tropical area its early recognisition and prompt treatment is important to reduce the life threatening complications.

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