INTRODUCTION

Tropical pyomyositis is a well-known suppurative disease of skeletal muscle in the tropics and subtropics usually preceded by history of minor trauma and in vast majority of cases, the aetiiological micro-organism is \textit{Staphylococcus aureus}.\textsuperscript{1-3} It usually presents with muscle pain, swelling, fever and constitutional symptoms with the limited number of reported complication. Tropical pyomyositis is usually diagnosed late due to its non-specific clinical features, predisposing patient to various complications along with increased risk of mortality.\textsuperscript{2} Some other factors may be important in the pathogenesis, including intense exercise, local trauma, parasitic infections and debilitating disease.\textsuperscript{4}

We are presenting a case of pancarditis as a complication of pyomyositis in a 10-year-old girl as an extremely rare sequel of the later. To the best of our knowledge, this is the first reported case of pyomyositis leading to septicemia, pancarditis and metastatic septic emboli to the peripheries.

CASE REPORT

A 10-year-old girl was transferred to the Armed Forces Institute of Cardiology, Rawalpindi, Pakistan, for evaluation of suspected infective endocarditis. There was a 10 days history of pyrexial illness, painful swelling of the left anterior thigh and 2 days history of impaired consciousness following a minor fall about 2 weeks prior to the start of her illness. There was no history of any significant illness in the past or predisposing factors or structural heart disease. At about 4th day of her illness, her thigh abscess was surgically incised and drained followed by oral antibiotics, at a peripheral hospital in Abbottabad. Plain radiograph of thigh were negative for fracture and arthritis. \textit{Staphylococcus (S.) aureus} was isolated on blood and pus culture which was sensitive to vancomycin, ciprofloxacin, and meropenem. Preliminary echocardiography at Abbottabad showed a large echogenic mass in her left ventricle and afterward she was referred to our hospital for further evaluation and treatment.

At her first examination at our hospital, she was an ill looking, pale, disoriented and drowsy young girl running high grade fever. Her pulse was 132 bpm and BP was 110/60 mmHg. Examination of precordium and abdomen were normal. Her left thigh was tender to touch. Site of abscess was kept open under dressing and the lower limb movements were restricted. Ischaemic changes causing gangrene of her right 4th and 5th toes and left 4th and 5th finger tips were also noticed (Figure 1).

Investigations revealed elevated total leukocyte count (14000 x 10\textsuperscript{9} /L), haemoglobin was 6 g/dl, ESR of 46 mm after one hour and elevated serum C-reactive protein. X-ray of chest and left thigh were, however, normal and USG of her thigh revealed abscess formation deep in the left thigh. Echocardiography showed moderate sized pericardial effusion with strands and well circumscribed large vegetation in the mid cavity measuring 15 x 22 mm attached via a pedicle to the postero-inferior wall of the left ventricle (Figure 2). As she was disoriented and drowsy, it was decided to do the CT scan of brain and lumbar puncture before proceeding for surgery. CSF examination was normal, while CT scan brain revealed brain oedema without a focal lesion.

A large encapsulated abscess stranded by the chordae of the mitral valve but sparing the mitral leaflets and annulus and extending into the left ventricle muscle causing ventricular pyomyositis and pyopericardial effusion was found on surgical exploration (Figure 3). At the same time, her left ilio psoas was also explored and deep seated, but well demarcated abscess was noticed.
which was incised and drained. She was started with intravenous (IV) antibiotics (nazocin, cefaperazone and salbactum) sensitive to \textit{S. aureus} for 14 days, followed by 4 weeks of oral antibiotics (nazocin and ciproxin). After 2 weeks of IV antibiotics, patient was discharged and advised regular follow-up along with 4 weeks of oral antibiotic therapy. At the completion of treatment, response of the child was phenomenal. She was asymptomatic without any residual morbidity. Written informed consent was obtained from the patient’s mother for publication of this case report and accompanying images.

**DISCUSSION**

Tropical pyomyositis is a bacterial infection of the skeletal muscles often caused by \textit{Staphylococcus aureus} and usually presents with muscle pain, swelling, fever and constitutional symptoms and carries significant morbidity and mortality without optimal treatment.\cite{1,2,5,6} We report an extremely rare complication, pancarditis, as a direct sequel of pyomyositis in a 10-year-old girl from Pakistan. In spite of early diagnosis and incision drainage of her thigh abscess, she developed life threatening pancarditis which needed open heart surgery and drainage of intra-myocardial abscess and pyopericardial effusion. Reported complications of tropical pyomyositis are recurrences, metastatic abscesses, renal failure, myocarditis, pulmonary emboli and coma.\cite{4,7} The diagnosis of pyomyositis is often delayed because of its non-specific clinical features as well as primary physicians are usually not familiar with the disease.\cite{2} Primary care physicians and paediatricians needs to maintain a high level of suspicion for the diagnosis of pyomyositis especially in paediatric patients presenting with fever and localized pain, since this condition is rare but carries a significant morbidity and mortality.\cite{1-3,5,6} As mentioned by Chiedozi in the study of 205 cases that aggressive management with antibiotics, incision and drainage usually leads to rapid resolution.\cite{8} To the best of our knowledge, this is the first report of pancarditis as a direct complication of pyomyositis in a young child.

As in this case, pyomyositis usually follow minor trauma yet exact pathogenesis is still not very clear. The patient presented with abscess of her right thigh as most of the patients with pyomyositis presents with solitary abscess usually affecting muscles of the thigh and calf as reported around 60% out of 54 cases of pyomyositis studied in a recent article from Nigeria and 41% from Greece.\cite{4,9} The muscles of the upper limb, head and neck are rarely affected.\cite{4} In this patient, the infectious agent was \textit{Staphylococcus aureus} (cultured from blood and pus aspirated from abscess) and was sensitive to vancomycin, ciprofloxacin and meroneum. Causative microbe is \textit{Staphylococcus aureus} in large majority of cases,\cite{3,7,10} reported to be about 92% from Nigeria.\cite{4}

MRI is the gold standard for the diagnosis and antibiotics along with incision and drainage of the abscess remain the standard treatment.\cite{1,3,11} MRI not only establishes early diagnosis but also help to stage the disease and to exclude other differential diagnosis.\cite{2} MRI shows diffuse
muscle enlargement, increased signal intensity on T2-weighted image during the initial stage and the muscle abscess with a high-signal-intensity rim on T1-weighted image during the later stage. In this patient, USG and plain radiographs were used to diagnose the pyomyositis and to rule out arthritis, soft tissue injury, bone fracture or osteomyelitis. MRI could not be done due to critical condition of the child.

We emphasize on early diagnosis, vigilance for complications and timely surgical intervention to reduce the associated morbidity and mortality for this rapidly progressive disease.

REFERENCES


.....☆.....