A rare case of isolated post-traumatic subscapularis abscess in a paediatric patient

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INTRODUCTION

A child presents with a shoulder swelling is always a diagnostic challenge for clinicians.1–9 The differentials vary from fractures, dislocations, bone or soft tissue tumor and infection. A subscapular abscess is often diagnosed late. High index of suspicion for early detection is paramount as patient can have rapid deterioration.1–6,7 Early detection is important as literatures reported deaths and hematogenous spread to lungs and brain leading to pneumoniae and bacterial meningitis.1,6–8 Most the previous reported cases described the abscess located in the subscapularis muscle with extension to the glenohumeral or subacapular space with or without concurrent lung or brain infection.1–9 Ninety percent of the abscesses grew Staphylococcus aureus from the cultures. Advanced radiological modalities such as magnetic resonance imaging (MRI) is the preferred option to achieve correct diagnosis and observe the size and location of the collection.6,9 Thorough radiological assessment enables the clinicians to decide on the best surgical option and approach for the treatment alongside antibiotics therapy. Our report is the first case of subcapularis abscess that was successfully treated with percutaneous drainage with favorable outcome.

CASE REPORT

An 11-year-old boy with no known medical illness came with left shoulder pain for a week duration. A day prior to his symptoms he had a fall onto his left shoulder from four feet height. Symptoms were also associated with fever for five days. Examination showed tenderness and warmth over the left shoulder with limited movement in every direction. There was no obvious swelling or any fluctuant area. Infective parameters showed a raised total white count of 18.8 (5-13x10³ uL), erythrocyte sedimentation rate (ESR) of 71 (0-10 mm/hour) and C-reactive protein (CRP) of 1264 (<47.6 nmol/L). Plain radiographs of the left shoulder were normal. Parenteral cloxacillin was started for him empirically.

Ultrasoundography of the left shoulder revealed subscapularis heterogenous collection sized 2.8x3.8x4.0cm (APxWxH). The rest of the rotator cuff muscles were intact and there was minimal anechoic fluid at left shoulder joint of 0.2cm thickness with no echogenic debris. However, the symptoms did not resolve with antibiotics. Subsequently contrast-enhanced computed tomography (CECT) of the left shoulder was performed and showed enhancing loculated left subscapularis collection 10.4x4.1x10.4cm (APxWxCC). Under ultrasonography guidance, left subscapularis collection 10.4x4.1x10.4cm (APxWxCC) was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 16G branula and total of 35cc frank pus was aspirated.

A left shoulder ultrasonography-guided drainage was performed under sedation. Patient was placed in prone position. Under ultrasonography guidance, left subscapularis collection is punctured with 16G branula and total of 35cc frank pus was aspirated. Track was dilated with an 8Fr dilator and an 8Fr pigtail catheter was inserted. Post-operatively the pain was controlled well with regular analgesics prescribed for three days.

Cultures was taken from the collection and grew Staphylococcus aureus.

ABSTRACT

Introduction: Subcapular abscess is an extremely rare condition. To our knowledge there were nine reports on subcapular abscess in the literature, four of them happened paediatric patients. The signs and symptoms could be very subtle making the diagnosis is difficult and often delayed.

Case description: We share a rare case of isolated subcapsularis abscess with no glenohumeral involvement of a healthy 9-year-old boy following blunt trauma to the shoulder treated with antibiotics and percutaneous drainage with good outcome.

Conclusion: Subcapsular abscess should be suspected in a child present with fever and shoulder pain. Magnetic resonance imaging is the best modality for diagnosis as plain radiograph would not give any diagnostic help. Surgical drainage combined with antibiotics are the mainstay of treatment. However, percutaneous drainage is one of treatment options especially in paediatric patient as demonstrated in our report.

Keywords: Abscess; Child; Imaging; Infection; Subcapsular; Treatment.