

Introduction

Septic arthritis of the sternoclavicular joint is extremely rare in an otherwise healthy adult. It is reported to affect less than 0.5 % of all bone and joint infections. It usually affects immunocompromised patients or patients with a history of intravenous drug abuse. Septic arthritis of the sternoclavicular joint requires immediate treatment to prevent morbidity and mortality. Serious complications from this condition include osteomyelitis, chest wall abscess and mediastinitis.

Discussion:

Sternoclavicular joint (SCJ) is a rare location for septic arthritis owing to less than 0.5 % in healthy individuals. Risk factors for SCJ septic arthritis include diabetes, intravenous drug use, trauma, infection at distant sites and infected central venous line.

However, in the minority of patients, about 23 % presented with no risk factors. The usual causative pathogen is Staphylococcus aureus.

The usual method of spreading is through haematogenous spread or from direct extension via adjacent sources of infection.

Salmonella bacteraemia occurs in about 5-10% of infected patients and some may develop focal infection such as meningitis, bone and joint infections.

Patients with SCJ septic arthritis usually presents with fever, pain and local swelling. Infrequently patients can also present with neck pain (2% of cases).

Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) is the modality of choice to determine severity and local complication of septic arthritis as well as to guide the surgical strategy. CT or MRI can demonstrate presence of mediastinitis, joint effusion, joint destruction or other complications such as empyema or chest wall abscess.

Final diagnosis is derived from culture of aspirated joint fluid or associated abscess or open biopsy.

Depending on severity and the extent of the disease, the current treatment of choice is intravenous antibiotics, incision and drainage, surgical debridement or en-bloc resection.

References:

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Case Presentation

A 49-year-old lady with no previous medical illness presented to our medical centre with sudden onset of left shoulder pain radiating to the left neck and left upper chest for 2 weeks. On examination, there was tenderness at the left sternal notch region. No palpable cervical lymph node. Cervical spine X-Ray detected no abnormality.

The initial chest X-Ray showed left upper zone opacities while the rest of the lung fields were clear. Ultrasound neck was performed and a collection inferior to the left sternoclavicular joint which appears to extend into the left thoracic region with capsular distension were discovered. Contrast enhanced CT (CECT) neck and thorax confirmed the collection inferior to the left sternoclavicular joint seen on ultrasound which was complicated with left apical pleural collection and mediastinitis.

In correlation with the short clinical history, CT appearances are likely suggestive of an inflammatory or infective process and a possible diagnosis of septic arthritis of the left sternoclavicular joint associated with left lung empyema were made.

Empirical intravenous antibiotic (Amoxicillin Clavulanate) was commenced as soon after she was admitted. CT guided aspiration of the pleural collection was done the next day. About 8 -10 mls of pus mixed with blood was aspirated and sent for microscopy, culture and sensitivity. The results revealed Salmonella group organisms with no evidence of malignant cells in cytologic investigation. Blood culture also showed Salmonella group bacteraemia. Tuberculous screening was negative. She was discharged with antibiotics after her condition improved. Oral antibiotics were continued for 6 weeks and a repeat CECT thorax for reassessment was also scheduled.

Follow-up CECT thorax about 7 weeks later revealed resolution of the left apical pleural collection with minimal residual left sternoclavicular joint collection. She no longer complains of shoulder or chest pain during follow up. CRP (C - reactive protein) and ESR (erythrocyte sedimentation rate) have also reduced at the 7 week follow up. She has completed a total of 9 weeks antibiotics with good response and is planned for another follow up after 4 weeks.

Conclusion:

Salmonella septic arthritis of the sternoclavicular joint is extremely rare in an otherwise healthy adult. The associated lung empyema complicates the condition further and could be detrimental if not detected early and treated with appropriate surgical and antibiotics treatment.

