



A Rare Cause of Chest Pain- "Septic Arthritis of Manubrium Sterni Joint"

KEYWORDS

Septic arthritis, manubrium sterni joint, Staphylococcus aureus

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ABSTRACT

Septic arthritis of the manubriosternal joint is very rare. Early diagnosis and treatment is required after ruling out the other causes of chest pain. We report a patient with a short duration of chest pain and fever. Pyoarthrosis of manubrium sterni joint was found on computed tomogram. Culture of the aspirate from the joint revealed Staphylococcus aureus. This case illustrates an unusually rapid development of septic arthritis in an otherwise healthy young man. Ten other cases have been described in the literature and are reviewed. Early diagnosis followed by adequate drainage and antibiotic therapy is very crucial in the treatment.

Introduction

Septic arthritis of the manubrium sterni joint is rare and there have been only ten cases of septic arthritis of manubrium sterni joint reported as per case report review done in the year 2007.¹

Case report

History:

A 51-year-old man presented in May 2014 with insidious onset central chest pain associated with fever and difficulty in breathing. There was history of generalized weakness since one month. No history of radiation of pain. There was no history of trauma or insect bite, loss of weight or appetite.

Recently diagnosed to have severe anemia with hemoglobin of 3 g% for which he was transfused with 3 units of whole blood in a local hospital. There was history of recurrent bleeding per rectum since 6 years. He denied any substance abuse or risk factor for HIV infection. He was a nonsmoker and a teetotaler.

Examination:

Day 1: Minimal local rise of temperature over upper middle anterior chest wall.

Day 2: Diffuse swelling present over anterior chest wall around the manubrium sterni joint. Associated with tenderness and local rise of temperature.



Figure 1: Examination finding at presentation to hospital

Investigations:

Hemoglobin: 7 g%

Total Leucocyte Count: 17100/cumm.

Differential Count: Neutrophils-93%, Lymphocytes-06%, Eosinophils-01%, Monocytes-01%, Basophils-00%

C – Reactive Protein: 204.83mg/L

Chest X-ray: Normal study.

CT chest – Septic arthritis involving manubriosternal joint with periarticular collection and inflammatory changes.



Figure 2: CT findings showing septic arthritis involving manubriosternal joint with periarticular collection and inflammatory changes.

CULTURE OF FLUID ASPIRATE FROM THE JOINT:
Staphylococcus aureus

Discussion:

Pyoarthrosis of the manubrium sterni joint is rare, and its occurrence in otherwise healthy adult is unusual¹. Predisposing factors are seen in 50% of the cases. Risk factors include intravenous drug abuse, immunosuppressive drugs, inflammatory joint disease, and primary source of infection

elsewhere^{2,3,4}. The clinical course can be acute, as seen in our case, or subacute over months.

Anatomically adjacent to the manubriosternal joint is the sternoclavicular joint, an atypical synovial joint. Septic arthritis involving this joint is relatively rare but far better known than the pyoarthrosis of manubriosternal joint. Septic arthritis of both the sternoclavicular and manubriosternal joints seems to occur in younger age group as compared with infection of other joints⁵.

Treatment and outcome

Delayed diagnosis as a result of misdiagnosis is not uncommon. Intravenous antibiotic alone may suffice at an early stage before pus formation has occurred. Patient was on ceftazidime and linezolid. Linezolid was continued later as per the culture and sensitivity report. He had made significant recovery within a week time in hospital. Surgical drainage may be required^{3,4} however it was not needed in our case. Prolonged antibiotics are required to prevent recurrence and sternal osteomyelitis⁵.

Conclusion

Septic arthritis of manubrium sterni joint in immunocompetent patient may be from blood transfusion in our patient. When patient has chest pain, swelling and tenderness at sternal angle further evaluation should commence to rule out septic arthritis of manubrium sterni joint.

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