

Septic Arthritis And Osteomyelitis Of The Acromioclavicular Joint Diagnosed By Bone Scan

Q Chai,, C Bui, R Mansberg, D Nguyen

Citation

Q Chai,, C Bui, R Mansberg, D Nguyen. *Septic Arthritis And Osteomyelitis Of The Acromioclavicular Joint Diagnosed By Bone Scan*. The Internet Journal of Nuclear Medicine. 2006 Volume 4 Number 1.

Abstract

A 42 year old febrile non intravenous drug user male presented with a painful right shoulder and a history of trauma 4 weeks earlier without evidence of overlying skin penetration. Inflammatory markers were elevated and a blood culture was positive for *Staphylococcus aureus*. Initial interpretations of plain radiographs and computed tomography (CT) of the right shoulder were non-diagnostic. A bone scan confirmed septic arthritis and osteomyelitis of the acromioclavicular joint (ACJ) and allowed prompt recognition and effective therapy to prevent joint destruction without the need for tissue culture.

CASE REPORT

A 42 year old febrile non intravenous drug user male presented with a painful right shoulder and a history of trauma 4 weeks earlier without evidence of overlying skin penetration. Inflammatory markers were elevated and a blood culture was positive for *Staphylococcus aureus*. Initial interpretations of plain radiographs and computed tomography (CT) of the right shoulder were non-diagnostic. A bone scan confirmed septic arthritis and osteomyelitis of the acromioclavicular joint (ACJ) and allowed prompt recognition and effective therapy to prevent joint destruction without the need for tissue culture.

Figure 1

Figure 1: A three phase bone scan revealed marked hypervascularity at the right shoulder and in the adjacent soft tissues (Fig 1a), with intense periarticular osteoblastic reaction at the right ACJ (Fig 1b) that extended beyond the confines of the joint capsule. Mild diffuse increased uptake at the right shoulder as compared to the left, was likely reactive in nature.

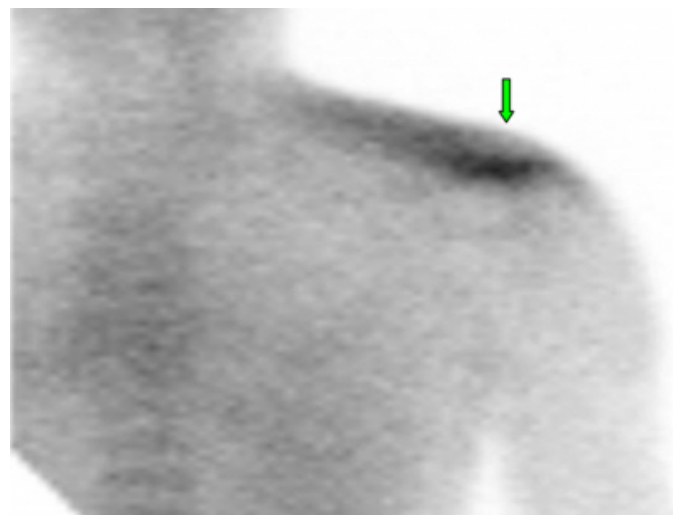
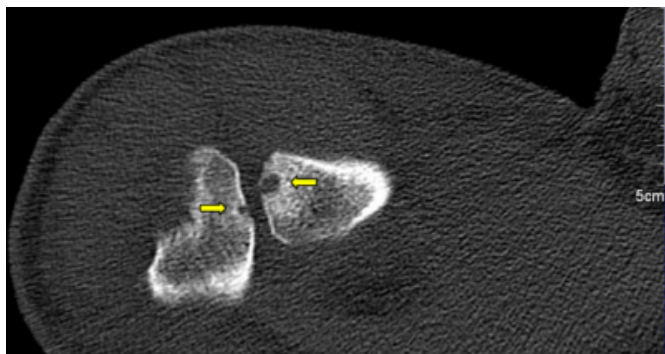


Figure 2



Figure 3

Figure 2: Retrospective review of the right shoulder CT confirmed small focal marginal erosions in the articular cortex of the right ACJ.



The final diagnosis was septic arthritis with osteomyelitis of the right AC joint, with associated inflammation/ infection of the surrounding soft tissues. The patient improved with intravenous antibiotic therapy.

DISCUSSION

Septic arthritis of the acromioclavicular joint (ACJ) is rare,^{1, 2, 3, 4, 5} and has been reported in association with intravenous

drug abuse, renal dialysis and acquired immunodeficiency syndrome.^{1, 2, 4, 5, 6, 7, 8, 9, 10} Septic arthritis tends to affect unusual joints in these individuals/ conditions. The most common infecting organisms are *Staphylococcus aureus* and *Haemophilus influenzae*.^{2, 5, 6, 7, 8, 9, 10} In this case, no obvious source of infection and no associated risk factors were identified, but functional imaging with bone scintigraphy complemented other imaging modalities in localizing the site of pathology and aided in the diagnosis.

CORRESPONDENCE TO

Dr Robert Mansberg Department of Nuclear Medicine
Nepean Hospital Penrith 2751 New South Wales Australia
Telephone: 61 2 4734 2156 Facsimile: 61 2 4734 1348
Email: mansberg@mail.usyd.edu.au

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Author Information

Quee Li Chai,, MB BS RANZCR

Department of Nuclear Medicine, Nepean Hospital- Penrith

Chuong Bui, MB BS FRACP

Department of Nuclear Medicine, Nepean Hospital- Penrith

Robert Mansberg, MB BS FRACP

Department of Nuclear Medicine, Nepean Hospital- Penrith

Diep Nguyen, MB BS FRACP

Department of Nuclear Medicine, Nepean Hospital- Penrith