

POCUS in evaluation of 'hot joint'

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Case Presentation: 80 year old male, who had basal cell carcinoma excision on the right side of neck, developed post-operative infection and was being managed with co-amoxiclav. On day 3 of his treatment, he presented out of hours to the ED with complaints of atraumatic right elbow pain, limiting his range of movement. There was local erythema with mild swelling. Skin on the joint was intact. He had no history of crystalopathy.

Management and Outcome: WCC count and CRP were nil acute. X-ray of the right elbow did not show signs of effusion or acute bony injury.

POCUS exam of the elbow showed joint effusion and effectively ruled out the probability of it being just cellulitis or bursitis.

There was early escalation to orthopaedic team to consider joint aspiration and if needed washout of the joint in theatre.



Key learning point: Given the atraumatic nature of this swelling; with history not being suggestive of sympathetic effusion and the rapidity of onset not likely to support osteomyelitis; demonstration of effusion on POCUS helped to add another valuable data point supporting the differential diagnosis of septic arthritis from haematogenous spread of infection. It's a rapid test with better yield than joint X-rays. Inflammatory markers on blood tests have poor sensitivity/ specificity for septic arthritis.

Additionally, since joint aspiration is a key work up for septic arthritis, having an ultrasonographic confirmation helps to optimize the success of this procedure, rather than it being a 'blind' attempt.