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CASE REPORT

Septic arthritis of knee masquerading as haemarthrosis in a patient on warfarin

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Background

Haemarthrosis in patients taking warfarin is a common orthopaedic scenario. The diagnosis is usually clinical. Patients usually present with painful swelling of the knee. The differential diagnosis includes inflammatory arthritis and septic arthritis. The role of diagnostic aspiration of the knee is debatable. In the absence of constitutional symptoms and presence of elevated INR, it is an accepted practice to treat the patient empirically on analgesics, bed rest and normalisation of INR, if the patient's medical condition allows. We present an atypical case of septic arthritis of the knee masquerading as haemarthrosis in a patient on warfarin.

Case report

A 56-year-old male presented to the Accident and Emergency department complaining of pain in his right knee. His pain was spontaneous in onset and had been present for 24 h. There was no history of trauma or illness. The patient correlated his pain and swelling to a DIY activity which involved bending his knee. He had a medical history of valvular heart disease for which he was prescribed warfarin. On examination, the patient was apyrexial (36.8). The knee was warm, tender and swollen with a grade II effusion. His white cell count was 7300/mm^3, CRP was 4 units and his INR was 1.8. A provisional clinical diagnosis of haemarthrosis was reached based on these findings and the patient was treated with analgesia and bedrest. Despite normalising the INR, the patient's pain and swelling increased. A decision to aspirate the knee was made. Sixty millilitres of yellow coloured fluid was aspirated and sent for microscopy and culture and sensitivity. The aspirate grew *Staphylococcus aureus*. The patient was taken to theatre for arthroscopic washout of his knee joint and antibiotics (Flucloxacillin 500 mg qds) was commenced. The patient made a full and uneventful recovery.

Discussion

This is an interesting case not only because the presentation was atypical but also because this incident raises an argument for routine aspiration of all cases of suspected knee haemarthrosis in patients taking warfarin. Haemarthrosis of the knee in patients on warfarin therapy is a very common clinical condition. Haemarthrosis can be treated in

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most instances conservatively, however it must be differentiated from septic arthritis, which needs immediate washout of the joint. The incidence of septic arthritis in the general population is 0.002—0.01%[2] with a mortality rate of 11.5%.[7] Risk factors for developing septic arthritis are; age $\geq$80 years, diabetes mellitus, rheumatoid arthritis, hip and/or knee prosthesis, joint surgery and skin infection.[4] Septic arthritis is a well-documented complication in patients with haemophilia, who are also at an increased risk of bleeding into the joint.[1,3,5,6]. However the incidence of septic arthritis in patients taking warfarin for medical conditions is unknown. Even though the presence of constitutional symptoms and of raised inflammatory markers can give clues to the diagnosis they are often normal in the early stages. Delay in diagnosis is an important factor contributing to increased mortality.[7] This problem is approached differently around the country. In some centres, patients with suspected haemarthrosis are being managed without aspiration whilst in others routine aspiration of the knee is being performed. This case raises doubts about treating this condition without aspiration thereby missing the opportunity to exclude/diagnose early septic arthritis in this group of elderly patients. In the absence of sufficient evidence regarding the incidence of septic arthritis in patients taking warfarin it would be better to reach a consensus for the treatment of this condition. We would advocate that all patients taking warfarin with painful knee swelling should have their knee aspirated and sent for culture and sensitivity. Further more a nationwide study is required to establish the magnitude of this problem.

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