Case report

Gonococcal arthritis: an unusual presentation as pseudothrombophlebitis

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SUMMARY A patient with a septic gonococcal arthritis of the knee presented as pseudothrombophlebitis.

Key word: septic arthritis.

A popliteal cyst with synovial rupture which mimics deep venous thrombosis has been called the pseudothrombophlebitis syndrome.^{1,2} It occurs when inflammatory conditions of the knee joint increase intra-articular pressure³ and has been described as a complication of septic arthritis.⁴⁻⁶ Gonococcal arthritis differs from other types of bacterial arthritis and is the probable cause of septic arthritis in young people.⁷ This infection has not been previously reported as causing pseudothrombophlebitis. We describe a case with gonococcal arthritis of the knee which presented with the clinical signs of a calf deep vein thrombosis.

Case history

A previously well 28-year-old white female was referred with a painful swollen left calf, diagnosed as a deep venous thrombosis. She had developed discomfort around the left knee 48 hours previously followed by sudden onset of pain and swelling in the left calf. She had no other symptoms preceding this illness.

On examination she was afebrile, the only abnormality being an effusion in the left knee with swelling, erythema, and tenderness in the popliteal fossa extending into the calf. The circumference of the left calf was 32.5 cm compared with the right calf

which was 30 cm. Investigations showed a haemoglobin value of 11.9 g/dl, white cell count $10.6 \times 10^9/l$ (78% polymorphs), erythrocyte sedimentation rate 53 (Westergren) mm/1st hour, C-reactive protein 104 mg/l (normal <10), random glucose 5.0 mmol/l, uric acid 224 $\mu\text{mol/l}$, rheumatoid arthritis latex and antinuclear factor tests negative. Purulent fluid was aspirated from the knee joint. The white cell count in the aspirate was $46.2 \times 10^9/l$ (95% polymorphs). Gram staining showed gram-negative intracellular diplococci of *Neisseria gonorrhoeae* which were sensitive to penicillin when cultured. Cultures from blood, throat, and vagina were negative.

The patient was treated with parenteral benzylpenicillin 2 MU six hourly for 36 hours. There was rapid resolution of the pain and swelling in the left calf. Further treatment with amoxycillin 500 mg eight hourly was given for one month. The patient made a full and uneventful recovery. Subsequent contact tracing showed her husband to be the source of infection.

Discussion

Arthritis is the commonest systemic manifestation of gonococcal infection.⁸ Two clinical forms of gonococcal arthritis have been described. Disseminated gonococcal infection is characterised by fever, migratory polyarthritis, macular/vesico/pustular rashes, and positive blood cultures. It usually presents no difficulty in diagnosis.⁹ The second presentation is often as an otherwise asymptomatic

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monoarticular arthritis with effusion from which the organism is recovered in only 50% of cases.¹⁰

The increasing incidence of gonococcal infection will lead to an increased occurrence of all the manifestations of this infection including the usual ones. When it presents as a monoarticular arthritis the diagnosis is often unsuspected due to lack of coincident genitourinary symptoms, the lack of a contact history on superficial enquiry, the relative paucity of clinical signs, and the difficulty of obtaining positive cultures. These difficulties are compounded if, as in the case described, the symptoms and signs are superficially those of a deep venous thrombosis rather than a septic arthritis.

In a condition that is best treated early a trial of appropriate antibodies may be justified when the diagnosis is suspected but is unable to be confirmed. Our experience emphasises not only that a gonococcal septic arthritis of the knee may masquerade as a calf deep venous thrombosis, but also that synovial fluid from any joint must be specifically examined for gonococci in young people if effective treatment is to be given promptly.

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Clinical vignette

A test for carpal tunnel effusion

Firm pressure is applied with the thumb for about half a minute to the volar aspect of the wrist. This squeezes out any circumarticular oedema. If the test is positive releasing the pressure shows a thumb print and also the invariable veins of this region which were hidden by the surrounding oedema.

E G L BYWATERS

(Readers are invited to submit brief accounts of new or little known physical signs in rheumatic diseases – Editor)