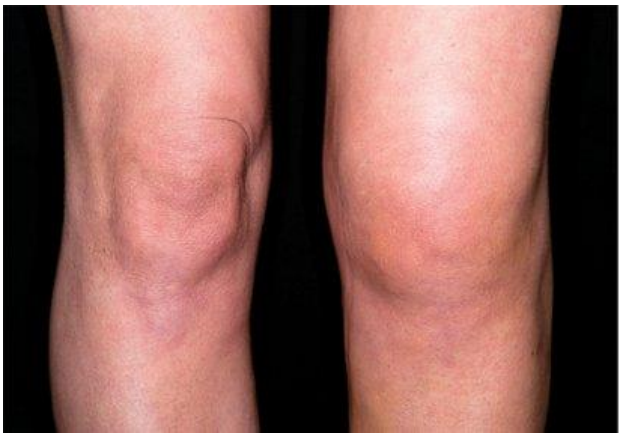
ED QUICK QUIZ

WHAT IS THE DIAGNOSIS?

BACKGROUND

You see a 33 year old gentleman in minors with a swollen knee. It has been painful for three days but has been worse for the last few hours and he can no longer weight bear – he thinks he twisted it while walking earlier in the day. You look at his knee:



There is an obvious effusion and the joint is generally tender and hot to touch. The patient will not tolerate any movement. You get an XR which shows only an effusion and you begin to conclude that the examination findings and pain are out of proportion to the mechanism of injury.

You ask for some observations which reveal a temperature of 38.2 degrees and a heart rate of 115. An ECG reveals 1st degree AV block and sinus tachycardia and you examine him more thoroughly, noting a subtle murmur. You check his records and note a history of intravenous drug use that he has not disclosed to you.

QUESTIONS

1. What is your differential diagnosis?
2. Are you worried about anything other than his knee?
3. How would you investigate and treat this gentleman?

ANSWERS & DISCUSSION

1. Differential Diagnosis

He could have a soft tissue injury but the presence of fever, tachycardia, pain pre-dating the injury and low force mechanism indicate something else is going on. In a young intravenous drug user you need to rule out **septic arthritis**, but the full differential is wider:

- Gout
- Pseudogout
- Gonnococcal arthritis
- Reactive arthritis
- Atypical presentation of polyarthritis/oligoarthritis

2. Infective Complications of Intravenous Drug Use

You also need to think about other infective complications of intravenous drug use such as infective endocarditis and discitis. This patient has a murmur which may be due to valve destruction. 1st degree AV block is seen in IE and is otherwise uncommon in young people. Remember that in acute IE the classical signs such as splinter haemorrhages and clubbing are usually absent.

3. Investigation and Treatment

Get venous access, commence IV fluids and take bloods including venous gas and blood cultures. Screen for other sources of infection (CXR, urine dip). In possible endocarditis take at least three sets of blood cultures from different sites. He also needs a synovial aspirate for microscopy and culture but we do not tend to do these in A&E. Discuss with the medical team to see if they want to aspirate prior to antibiotics, but if there is likely to be a delay treat with flucloxacillin and gentamicin (if considering infective endocarditis add amoxicillin).

In GRI refer septic arthritis to the medical team. Infection of a prosthetic joint should be referred to orthopaedics.