Discitis is inflammation of the vertebral disc space. It is commonly caused by infection and may coexist with vertebral osteomyelitis. The lumbar spine is most often affected.

Haematogenous spread of infection from other regions of the body is implicated, and the offending organism is usually Staphylococcus Aureus.

Insidious onset is characteristic with spinal pain and localised tenderness.

It is well recognised that the diagnosis may be difficult and delayed due to the rarity of this condition. We recognise also that many patients attend with undifferentiated “back pain”.

End plate destruction
Psosas abscess
Epidural abscess and discitis on T2 MRI

Case study:

We discuss the emergent presentation of a 44 year old female presenting to our Emergency Department with "back pain" and a diagnosis of lumbar discitis. We outline her management with particular regard to inflammatory biomarkers and "front door" radiology.

Our patient attended the Emergency Department (ED) with an extended history of lower back pain for three months, which was treated in the community with NSAIDs and physiotherapy. She presented to our ED with low grade fever and rigors.

There was no history of trauma and no recent long haul travel. However, her history revealed recent urinary tract infection which had been treated with Trimethoprim.

On admission to our Clinical Decision Unit (CDU) the patient had low back pain, normal temperature, and a normal neurological examination. Results of Full Blood Count (FBC) showed no increase of the white cell count.

When other inflammatory markers were checked later next day, this revealed an elevated CRP of 98. This prompted urgent imaging studies of the lumbar spine.

Plain radiographs of the lumbar spine showed bony destruction. The findings on MRI Lumbar Spine were in keeping with inflammatory change secondary to discitis, which was infiltrating and involving the vertebral bodies, as well as extending to form an extra dural collection. There was also a paravertebral collection extending to both psoas muscles.

Differential diagnosis:
1. Herniation of vertebral disc
2. Discitis
3. Osteomyelitis
4. Rheumatoid Spondylitis
5. Spinal Tumors

At this stage the patient was referred to the Orthopedic and Neurosurgical teams for further management and treatment.

Conclusion and discussion:

Pure Discitis is a very rare condition. More commonly, the infection is within the adjacent vertebrae (osteomyelitis). Spinal surgery and systemic infection are risk factors, especially pelvic infection. Of note, E.coli, Proteus and Pseudomonas are increasingly pathogenic.

Because of common symptoms, the diagnosis of discitis may be delayed. Patients with discitis are often diagnosed initially with Musculoskeletal or Simple Mechanical Back Pain.

However, we recommend that patients with prolonged or severe history of pain, those with risk factors for infection and/or with constitutional symptoms should have routine laboratory blood testing (including ESR and CRP). We also advise plain radiography as a minimum in these individuals, and adopting a lower threshold for liberal use of MRI. Magnetic Resonance Imaging should be utilised by the Emergency Physician, if the clinical picture or initial tests as outlined above are cause for concern.

The Emergency Physician should bring discitis to “the diagnostic table” when attending those commonly presenting with “back pain”. Utilising the right tests for the right patients will enable us to diagnose that Discitis!