

## **Spinal Infection**

Infections in the spine are fortunately rare, but unfortunately the most common cause is surgery itself (see below).

### ***De novo infection***

The most common (although still rare) infection occurring in the spine de novo is discitis. Other types of infection include osteomyelitis (bone infection) or epidural abscess (pus in the spinal canal). These infections can co-exist and are more common in high risk patients that have a suppressed immune system or who are exposed to blood borne infection e.g. intravenous drug abusers. However, they may occur in previously fit and well patients with no risk factors and be related to an infection that has seeded in the blood from elsewhere e.g. skin or urinary tract.

Presentation is with back pain +/- neurological symptoms and usually systemic symptoms of fever, malaise and chills. This is however not universal and the problem may remain silent for a long time.

Diagnosis relies on imaging together with blood tests and a biopsy may be suggested. Because most spinal infections are caused by a staphylococcus then an antibiotic can be started without a biopsy in some circumstances as a biopsy is quite invasive.

Biopsy under xray control often has a low yield and sometimes open biopsy of the spine is needed. The advantage of biopsy is that it can rule out the possibility of tumour and may diagnose the causative organism of infection is the cause, enabling antibiotics to be accurately prescribed.

Surgery is indicated for collapse, persistent pain, deformity and deteriorating neurological function although it should be emphasised that there is a long term post-operative requirement for antibiotics.

In the UK, TB is once again increasing in frequency and will need to be excluded if a spinal infection is considered.

### ***Hospital Acquired Spinal Infection***

This is unfortunately one of the risks of having any operation. All precautions are taken to prevent this pre-operatively and the operating theatre including peri-operative antibiotics and the risk of infection varies from 1-10% depending on the type of surgery and the patient. Posterior lumbar spinal surgery has the highest infection rate of any operation on the spine whereas anterior surgery has a much lower infection risk.

Superficial infection due to a stitch abscess is relatively common and can be treated medically but if there is any doubt that deep infection exists, a surgical washout and sampling should be performed. If deep infection does occur then early diagnosis and treatment is mandatory. If metalwork is present then this cannot be removed acutely, but often needs to be exchanged when washout of the wound is performed. Diagnosis of the specific organism causing the infection and treatment with antibiotics then follows. With aggressive early treatment long term complications are uncommon but sometimes chronic osteomyelitis can occur leading to spinal collapse and further wound problems.

The problem of hospital acquired wound infection should not be underestimated and should play a very important role in whether to consider surgery.

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