

### Rapid Fire Papers 1

#### [O39] EVALUATION OF THE CURRENT TRENDS AND MANAGEMENT OF SPINAL INFECTION

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**Aim:** Spondylodiscitis and vertebral osteomyelitis can lead to long-term sequelae if not diagnosed and treated promptly and appropriately. The Royal National Orthopaedic Hospital (RNOH) has devised a new spinal infection referral system within the UK that allows cases to be discussed in a specialist multi-disciplinary (MDT) forum. National guidelines were devised in 2013 to help guide treatment, which recommends both tissue biopsies from the affected region and a MRI of the entire spine. The aims of this study were to assess the current treatment and referral practices and compare them with the set guidelines. It is hypothesised that a high percentage of patients are started on antibiotics without a biopsy or a positive set of blood cultures, a low percentage of patients are referred without undergoing a MRI of the full spine and that there is a long delay in referral to the MDT.

**Method:** A retrospective case study analysis was carried out on all spinal infection referrals received by the Royal National Orthopaedic Hospital over a 2-year period (2014-16), using the standards set by the current national guidelines. Clinical features, haematology results, imaging, biopsy results, treatment and outcome were all reviewed. Three key areas were addressed; whether antibiotics were commenced before positive cultures or biopsy, whether a MRI of the entire spine was performed and the time taken for referral from the onset of symptoms.

**Results:** A total of 49 cases were identified, the average age was 56 years and the majority were male (67%). The most common organisms grown were staphylococcus aureus and mycobacterium tuberculosis. Lumbar (37%) and thoracic (31%) spine were the most predominant regions affected. As predicted only 42% of the patients were referred with a whole spine MRI, only 33% had a biopsy and 29% had positive blood cultures before starting antibiotics. The average time to referral was 62 days overall (10 days for acute referrals).

**Conclusions:** This multicentre study highlights a number of key concerns with both the referral and treatment of spinal infections. New national infection guidelines recommend a tissue sample prior to antibiotics; however this study showed that only 45% of patients had either a biopsy or positive blood culture before starting antibiotics. The time to referral was prolonged and the majority of patients did not receive a whole spine MRI. Overall this confirms the study's hypothesis and the need for better management of this complex and debilitating condition.