

# TB Immune Reconstitution Inflammatory Syndrome (TB-IRIS) In The Treatment Of TB Spine

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## INTRODUCTION:

Tuberculosis immune reconstitution inflammatory syndrome (TB-IRIS) is an exaggerated immune response towards the antigens of mycobacterium tuberculosis that can cause transient deterioration clinically or radiologically after initiation of treatment<sup>1</sup>. We are reporting TB-IRIS after initiating treatment in two patients.

## CASE SUMMARIES:

Mr. G was diagnosed with spinal tuberculosis without neurological deficit and instability and was started on anti-TB treatment. However, 2 weeks into treatment he had bony instability and developed incomplete neurology, which required emergency spinal decompression and stabilization.

Mr J, was diagnosed with pulmonary and spinal tuberculosis with complete neurology. MRI showed thoracic and lumbar lesions. Anti-TB treatment was commenced and posterior spinal decompression and stabilization was performed on the thoracic lesion. Anterior decompression and bone grafting were done on the lumbar lesion in view of pressure sore. Post op he developed haemodynamic instability, temperature dysregulation, worsening blood parameters and radiographs showed exaggerated bony destruction at lumbar lesion. Repeated lumbar biopsy showed negative yield.

## DISCUSSION:

Challenges arise in identifying TB-IRIS as there is no specific confirmation test and presentations can be varied<sup>1</sup>. Strict diagnostic criteria have been described by Geri et al<sup>2</sup>.

In these cases, both patients showed further bony destruction after commencement of anti TB treatment. In the first patient, a stable thoracic lesion with no neurology, developed bony destruction and deteriorated to an unstable lesion with partial neurology. The second patient had unstable thoracic and lumbar lesions. Post-surgery and commencement of anti TB drugs, lumbar lesion showed exaggerated destruction along the course of treatment.

In both patients, stability was able to be secured by spinal instrumentation during the period of exaggerated immune response.

## CONCLUSION:

Although challenging, making the diagnosis of TB-IRIS is crucial. Early identification may redirect the course of treatment, perhaps preventing its devastating sequelae with immunomodulation<sup>1</sup>. Spinal instrumentation may secure the structural stability during exaggeration of immune response.



Fig 1: Comparison of MRI thoracic spine before (left) and after (right) treatment of Mr. J

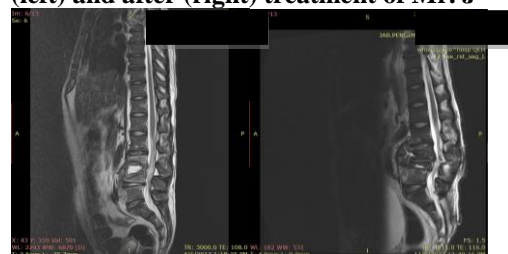


Fig 2: Comparison of MRI lumbar spine before (left) and after (right) treatment of Mr. J