

Delayed Onset White Cord Syndrome Post-operative Thoracic Spine Decompression Surgery

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INTRODUCTION:

White cord syndrome is a rare and catastrophic complication from spinal decompression surgery.

REPORT:

36-year-old lady presented with bilateral lower limbs weakness, numbness and gait instability, progressively worsening over 2 months. Examination revealed left and right lower limb power of 3/5 and 4/5 respectively. She also had hyperreflexia and positive clonus sign. MRI findings showed extensive OPLL with spinal stenosis over C2-7, T2/3, T7/8, L1/2. She underwent Posterior Decompression surgery over T2/3, T7/8 and L1/2. Decision for thoracic decompression was made because her symptoms are suggestive of thoracic rather than cervical myelopathy. Intra-operatively noted thickened lamina, facet joint fusion with calcified ligamentum flavum. SSEP/MEP neuromonitoring showed no cord injury. Immediately after operation, her neurological function was similar as preoperatively. However, her left lower limb power deteriorated to 1/5 on day 3 post-operation. Right lower limb motor and sensory function were unaffected. Urgent MRI spine (T2 film) revealed increased cord hyperintensity over T1-T3 level with evidence of spinal cord oedema as shown in the figure, no cord injury/hematoma. Intravenous Dexamethasone was immediately started. Upon discharge, there was improvement of her left lower limb neurology to 3-4/5. She regained her left lower limb power to 5/5 six weeks after operation, except for hip flexor which was 4/5. She mobilized with walking frame then independently 5 months post operation.



(Pre-op)

(Post-op)

DISCUSSION:

Etiology of white cord syndrome is still unclear. General consensus agreed it is due to transient paralysis caused by free radical oxygen, secondary to reperfusion injury of the cord in chronically ischemic tissue. It can happen as late as a week postoperatively¹, although most of the reported cases presented immediately after operation.

CONCLUSION:

It is crucial for us to acknowledge reperfusion injury to cord as a possible complication to spinal surgery so prompt action can be taken.

REFERENCES:

1. Lei C, Late onset white cord syndrome following Anterior Cervical Discectomy and Fusion: A case report. *Exp Ther Med* 25:71, 2023