Removal of metalwork from the lumbar spine

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Introduction

Pseudarthrosis following instrumented posterolateral L2–L4 lumbar fusion. Ongoing axial back pain.

Case description

Forty-two-year-old female who is normally fit and well. She developed back pain following a motor vehicle accident in 2006 when she was the driver of a car hit at low speed. She underwent L2–L4 instrumented posterolateral fusion in a different institution almost 2 years ago. She persisted with severe incapacitating back pain and some minor anterior unilateral thigh pain with an ODI score of 84 %. She failed to improve with non-operative treatment including physiotherapy, pain management and injection therapy.

Radiographic assessment confirmed loosening of the distal metalwork. There is a clear halo around the L4 pedicle screws and similar less marked appearances around the L3 screws. This indicates a likely pseudarthrosis.

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This patient has a complicated history, has failed surgical treatment and has an ODI of 84 %. Her main problem is axial back pain. In the first instance, following a detailed discussion with the patient, we agreed to do the simplest possible procedure, which is to remove the metalwork [1, 2].

Surgical procedure

Prone position on bolsters, old midline scar re-opened, bilateral subperiosteal dissection to expose metalwork. Samples taken for microbiological assessment, then prophylactic intravenous antibiotics administered.

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A loan kit was ordered to remove the implants, as this is not a system used in this institution. The correct screwdriver was missing, which became apparent after exposure of metalwork. A 4.5 star drive screwdriver was used to remove the locking nuts, which had an acceptable although not perfect fit. There was no screwdriver to remove the pedicle screw. The screws were polyaxial therefore a small rod was reapplied to the screw and secured allowing a grip for removal. There was movement across both fused levels indicating a pseudarthrosis. Saline wash and layered closure was performed in the standard fashion.

Postoperative information

The patient was mobilised when able. A check radiograph was performed to exclude any iatrogenic spondylolisthesis following removal of hardware. The patient was discharged home when comfortable.

Discussion and conclusion

This patient has a complex history and failed conservative treatment. She had a clear pseudarthrosis. Her pain could be unrelated to the instrumented levels. Considering this it

was decided to perform the simplest procedure, which does not reduce further treatment options. Her hardware was removed. If this fails to improve her pain to a satisfactory level a full work-up will be required before considering further options.

Conflict of interest None.

References

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