

WHEN TO INSTRUMENT? DELAYED DEFINITIVE FUSION IN RECURRENT MULTIDRUG-RESISTANT PYOGENIC SPONDYLODISCITIS — A CASE REPORT

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INTRODUCTION

- Pyogenic spondylodiscitis is a challenging condition, with mortality rates **up to 20%**
- Particularly relevant in elderly patients with comorbidities
- 20–30%** of cases occur following **previous spinal surgery**
- Early **surgical intervention** may provide better outcomes than conservative treatment
- The optimal **timing** for definitive instrumentation in recurrent infection remains **controversial**

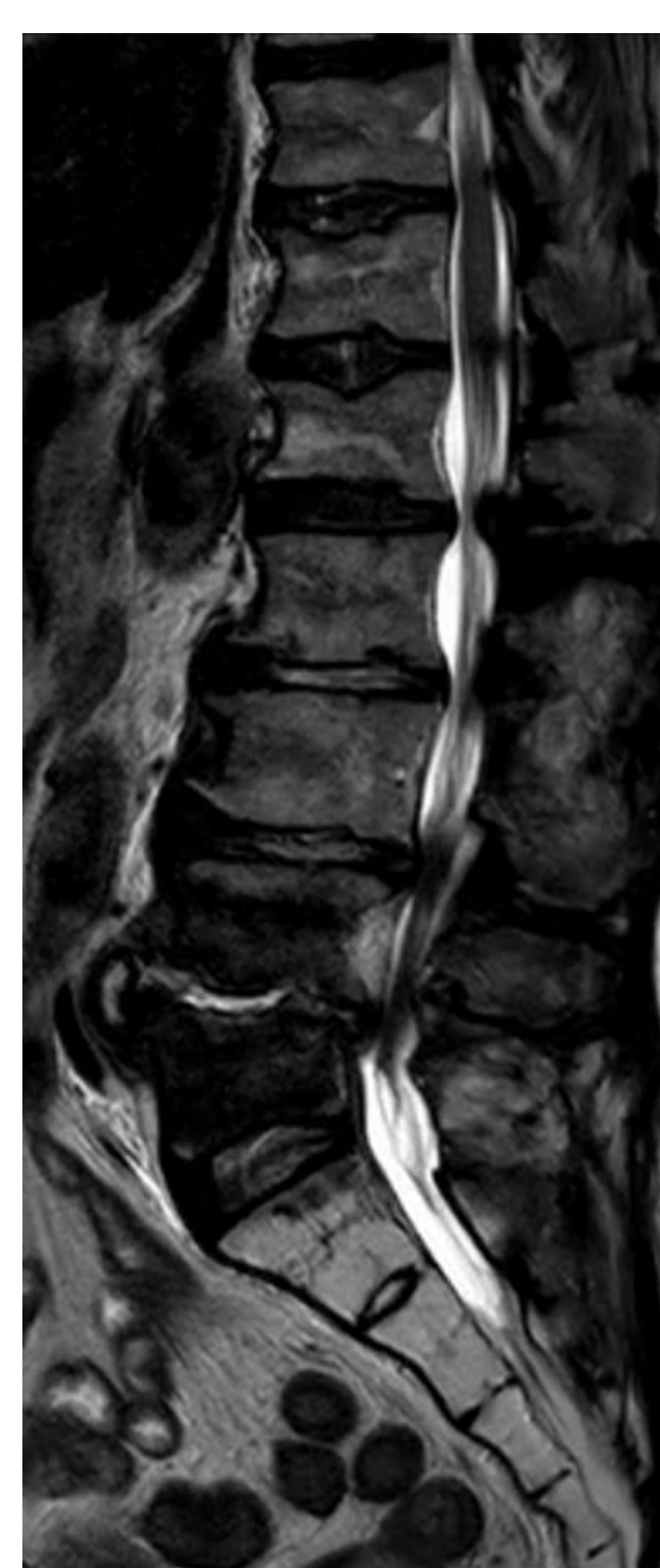
MANAGEMENT & RESULTS

- 3 **infectious relapses** despite targeted therapy and repeated debridement; neurological deterioration **AIS C → AIS D**
- After 3rd debridement: **conservative management** despite persistent MRI abnormalities, based on sustained clinical/biochemical stability and patient reluctance
- Susceptibility-guided antibiotics throughout, under **Infectious Diseases guidance**
- After >3 months of **apyrexia** and **normalized markers**: **L4 laminectomy + L3–S1 instrumented fusion** (February 2026)
- No intraoperative purulence; tissue cultures negative
- 6 weeks** of post-fusion **antibiotics**
- Neurorehabilitation with **progressive improvement** and **no infectious recurrence** through April 2026

MRI



Aug 2025

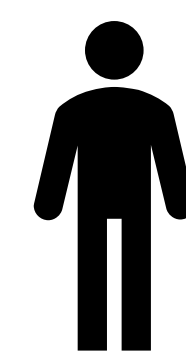


Nov 2025



Jan 2026

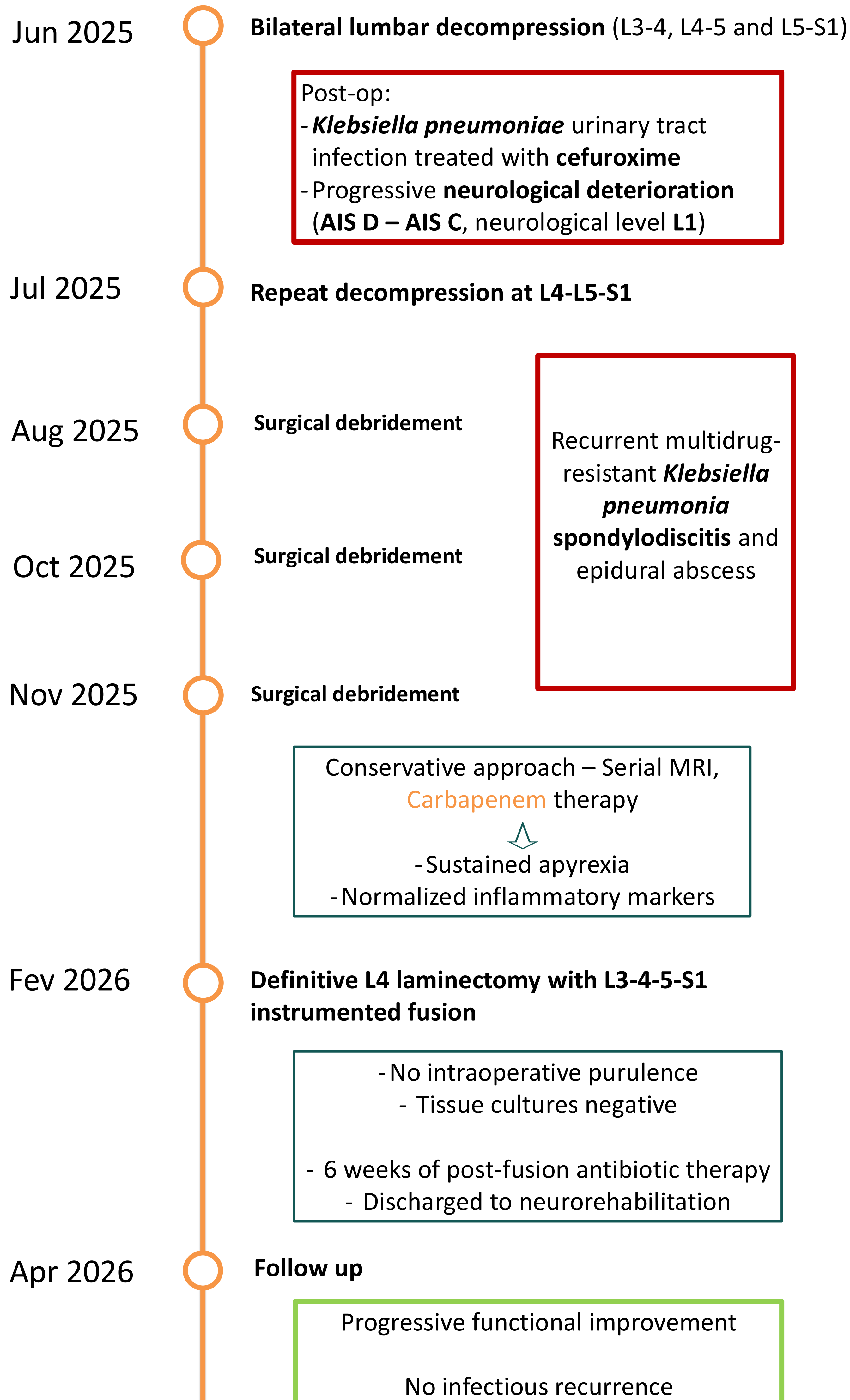
PATIENT PRESENTATION



77y.o.

- Degenerative lumbar stenosis

CASE CRONOLOGY



CONCLUSIONS

- Delayed definitive instrumentation can be successfully performed in recurrent pyogenic spondylodiscitis when clinical and biochemical stability is achieved — even with persistent radiological abnormalities
- Clinical and laboratory parameters were more reliable than imaging alone for determining the appropriate instrumentation timing
 - Particularly in elderly patients with MDR organisms, where reinfection risk with permanent implants must be carefully weighed
- Evidence-based criteria for instrumentation timing** in this population are still **needed**

Rawall S, Hiatt LA, Rajaram SM, Theiss S. Management of Pyogenic Spondylodiscitis in Adults. J Am Acad Orthop Surg. 2025 Nov 15;33(22):1257-1264. doi: 10.5435/JAAOS-D-24-01088. Epub 2025 Apr 23. PMID: 40279562. / Thavarajasingam SG, Vemulapalli KV, Vishnu K S, Ponniah HS, Vogel AS, Vardanyan R, Neuheff J, Kramer A, Shiban E, Ringel F, Demetriades AK, Davies BM. Conservative versus early surgical treatment in the management of pyogenic spondylodiscitis: a systematic review and meta-analysis. Sci Rep. 2023 Sep 20;13(1):15647. doi: 10.1038/s41598-023-41381-1. PMID: 37730826; PMCID: PMC10511402. / Chaniotakis C, Koutserimpas C, Tsantes AG, Papadopoulos DV, Tsiroidis CA, Karantanis A, Alpantaki K, Hadjipavlou A. Post-Discectomy Infection: A Critical Review and Suggestion of a Management Algorithm. J Clin Med. 2024 Mar 4;13(5):1478. doi: 10.3390/jcm13051478. PMID: 38592315; PMCID: PMC10935210.