P49. Outpatient intravenous antibiotic therapy in spinal neurosurgery patients with spondylodiscitis: a retrospective analysis of efficacy, safety, and healthcare cost implications

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Background Context: Spinal infections like spondylodiscitis present challenges in neurosurgery, often requiring prolonged antibiotic therapy. Recent trends favor outpatient intravenous antibiotic administration to reduce hospital stays and costs. This study evaluates the efficacy and safety of outpatient intravenous antibiotic therapy in spinal neurosurgery patients with spondylodiscitis, focusing on health-related quality of life (HRQoL), overall survival (OS), and feasibility, especially in older patients.
Purpose: N/A .
Study Design/Setting: N/A.
Patient Sample: N/A.
Outcome Measures: N/A.
Methods: A retrospective study was conducted on 67 patients who received peripherally inserted central catheter (PICC) for IV antibiotic therapy between January 2020 and December 2022. The study involved detailed data collection from patient medical records, including demographic information, clinical notes, and follow-up data. The surgical approach was tailored to individual patient needs. The primary endpoint was healing or full recovery, assessed by radiographic and laboratory criteria. Statistical analysis used GraphPad PRISM 9 software, with significance set at $p<.05$.
Results: The median age of patients was 61 years, with 44% female. The average hospital stay was 20 days, followed by 70.32 days of outpatient therapy. Most identified pathogens were Staphylococcus epidermidis and methicillin-sensitive Staphylococcus aureus. Financial savings amounted to €2.7 million, mainly from reduced hospital stays and elimination of bed misallocation for antibiotic therapy. 99% of patients showed no evidence of persistent infection at the final follow-up, although one case of soft tissue abscess due to catheter complication was noted.
Conclusions: Outpatient IV antibiotic therapy using PICC is effective and safe for treating spinal infections in neurosurgery patients, especially the elderly. This

approach reduces hospital stays and healthcare costs, though it requires careful monitoring and patient education to prevent complications. Further research is necessary to validate these findings and explore long-term outcomes and patient satisfaction.

FDA Device/Drug Status: This abstract does not discuss or include any applicable devices or drugs.