

The Microbiology of Secondary Spine Infections: An Institutional Experience of 170 Cases

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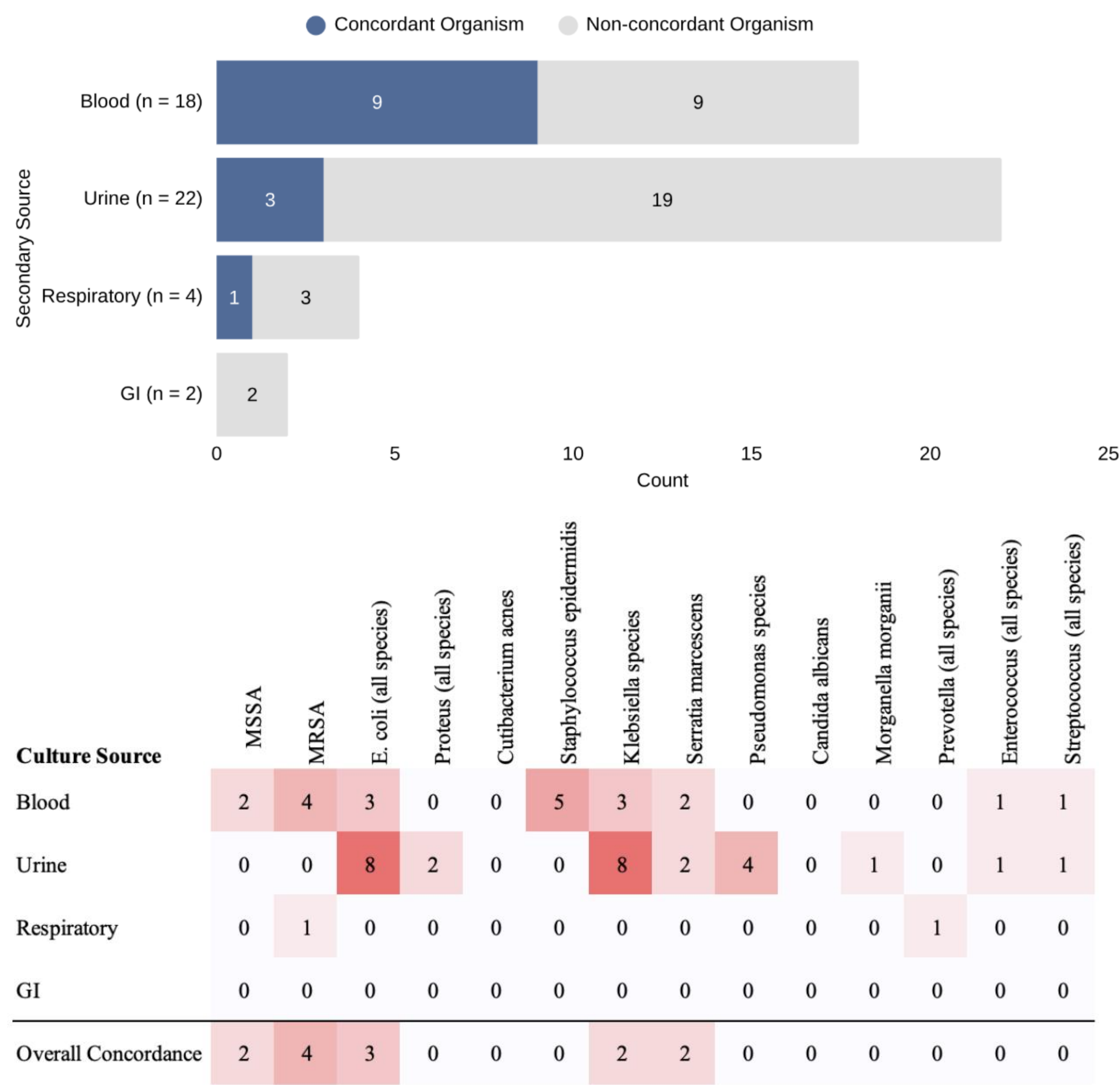
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INTRODUCTION

Despite advances in infection management, SSIs remain challenging to diagnose and treat and considerable long-term consequences.

Objective: characterize the microbiology of 170 patients with postoperative spine infection at our institution and to describe patterns of antimicrobial treatment

RESULTS

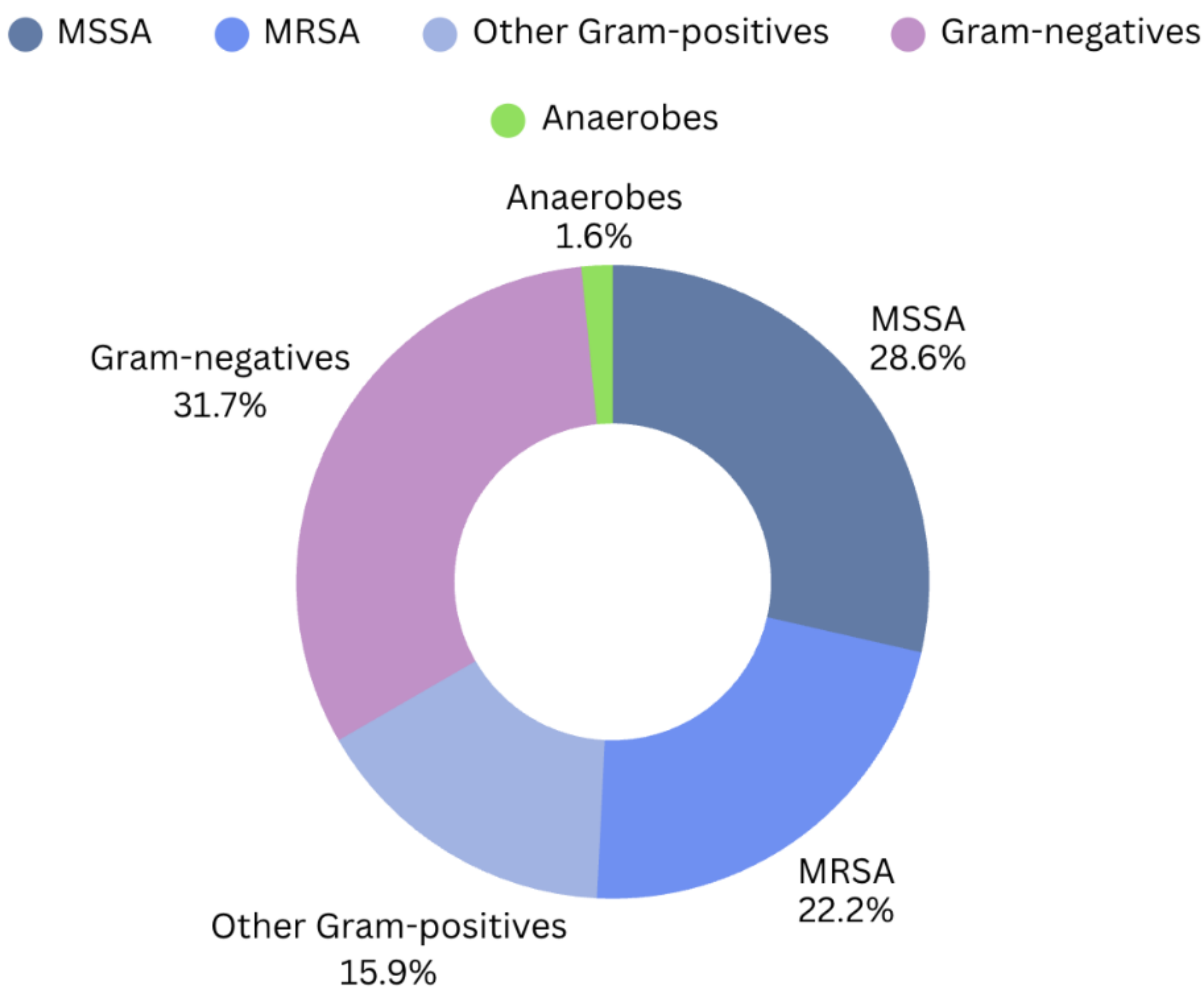


SUMMARY

- S. aureus accounted for 50.8% of monomicrobial cultures
- One-fifth of the patients in our cohort required chronic suppressive antimicrobial therapy
- An extra-spinal infection source was identified in 22.4% of patients, and 45% demonstrated **overlapping microbiology with intraoperative cultures**
- The presence of an extra-spinal infection source is **significantly associated** with chronic antimicrobial therapy
 - polymicrobial intraoperative cultures and organism concordance not associated with chronic antimicrobial therapy

METHODS

- Retrospective chart review of adult patients who underwent spine surgery between 2015-2025.
 - 921 total patients 170 (3.45%) patients developed a postoperative SSI requiring surgical management
 - **Procedures:**
 - instrumented, non-instrumented
 - primary and revision procedures
 - Diagnosis of SSI was determined based on a chart review of clinical findings and documentation of surgical intervention for infection treatment
- Cultures collected intraoperatively and from secondary sources (blood, urine, respiratory, GI)
- T-tests and chi-square models assessed for significant differences ($p<0.05$).



CONCLUSIONS

- These findings support the perioperative evaluation of extra-spinal sources of infection, such as indwelling catheters and poorly controlled diabetes.
- Consider routine assessment for bacteremia or urinary tract infection, particularly in delayed or recurrent cases
- The observed association with extra-spinal infection sources may reflect greater overall clinical complexity or unmeasured confounding
- Development of standardized diagnostic and management algorithms for postoperative spine infection is needed