

Outcomes Of Three-Stage Revision For Fungal Periprosthetic Joint Infection Of The Hip: A Retrospective Cohort Study

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Introduction

Background

Fungal periprosthetic joint infection (fPJI) of the hip is a rare but devastating complication in joint arthroplasty, characterized by diagnostic complexity, limited treatment guidelines, and high reinfection risk. Unlike bacterial PJIs, robust evidence for surgical and antifungal management strategies remains sparse

Objectives

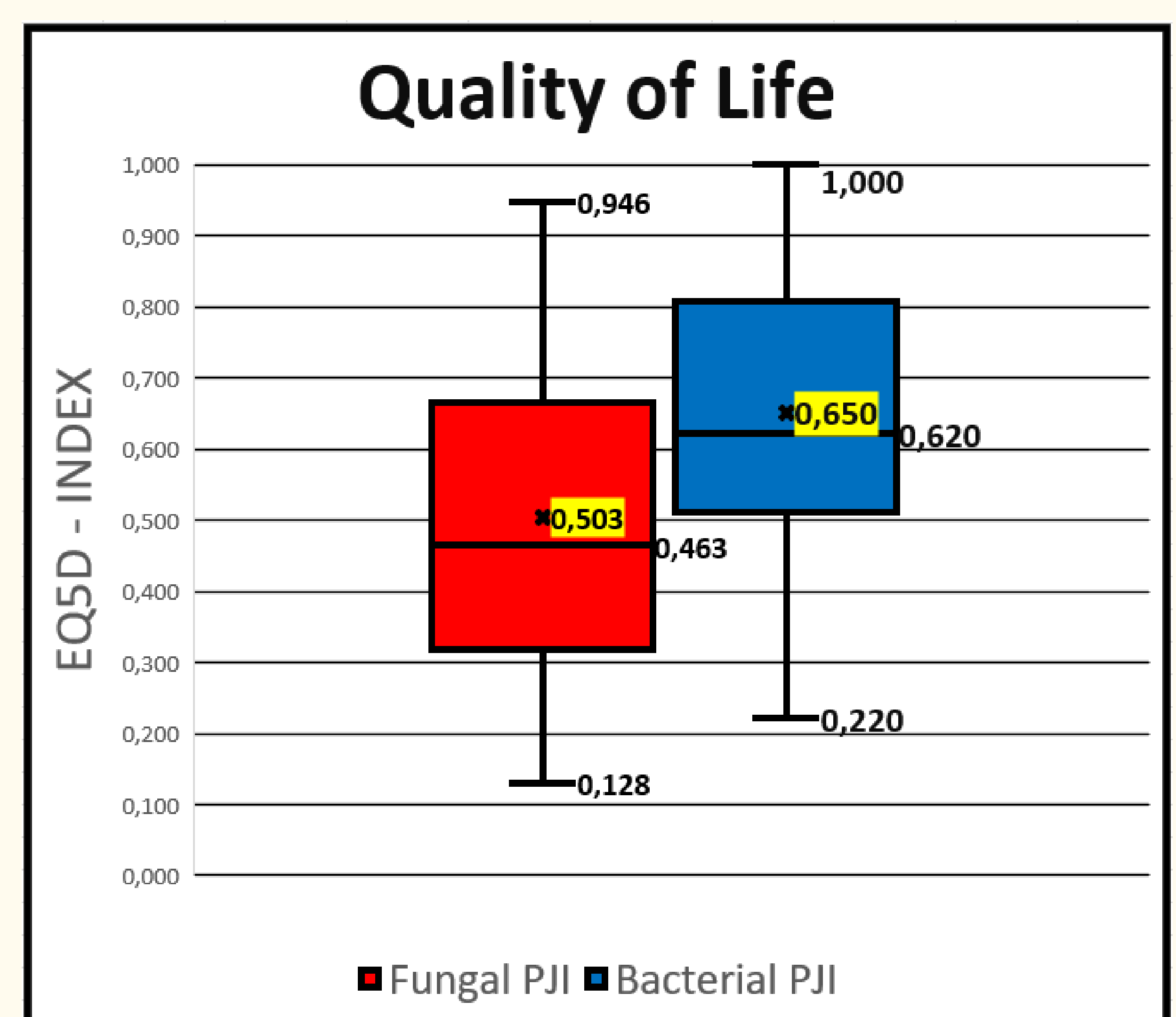
This study aimed to evaluate clinical outcomes following three-stage revision total hip arthroplasty (rTHA) for fPJI.

Methods

Twenty-nine patients with microbiologically confirmed fPJI of the hip were included, all treated with 3-stage revision between 2019 and 2024. All patients received targeted local and systemic antifungal therapy and underwent explantation followed by, spacer exchange and reimplantation in the long interval. Primary endpoints were infection eradication and all-cause mortality. Secondary outcomes included reinfection (fungal and bacterial), reoperation rate, and patient-reported outcome measures (Oxford Hip Score and EQ-5D) at 12 and 24 months.

Results

The mean age was 69.4 ± 10.3 years. *Candida albicans* (55.2%) and *Candida parapsilosis* (24.1%) were the predominant pathogens. The mean number of surgeries per patient was 2.9 (range: 2–5). At a mean follow-up of 34.6 months, infection eradication was achieved in 72.4% of patients. Reinfection occurred in 27.6%, including several cases of bacterial superinfection. PROMs at 24 months were significantly inferior compared to a matched cohort with bacterial PJI ($p < 0.01$). Independent predictors of reinfection included Charlson Comorbidity Index ≥ 5 ($p = 0.02$) and prior DAIR procedure ($p = 0.04$).



Conclusion

Multistage revision for fungal PJI of the hip demonstrates only moderate success, with a substantial rate of reinfection and compromised functional outcomes. These findings emphasize the importance of early pathogen identification, aggressive surgical intervention, and prolonged antifungal therapy. Prospective multicenter data are essential to optimize protocols for this complex condition.