

Joint Decision Making in Prosthetic Joint infections(PJIs): outcomes of early oral switch antibiotics strategies in an MDT managed cohort



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BACKGROUND

PJIs represent a challenging complication of arthroplasty, necessitating coordination of both surgical and medical management. Traditionally, this has involved prolonged courses of intravenous antibiotics. New data from the OVIVA trial¹ support early switch to appropriately selected oral therapy as non-inferior, without any significant difference increase in adverse events.

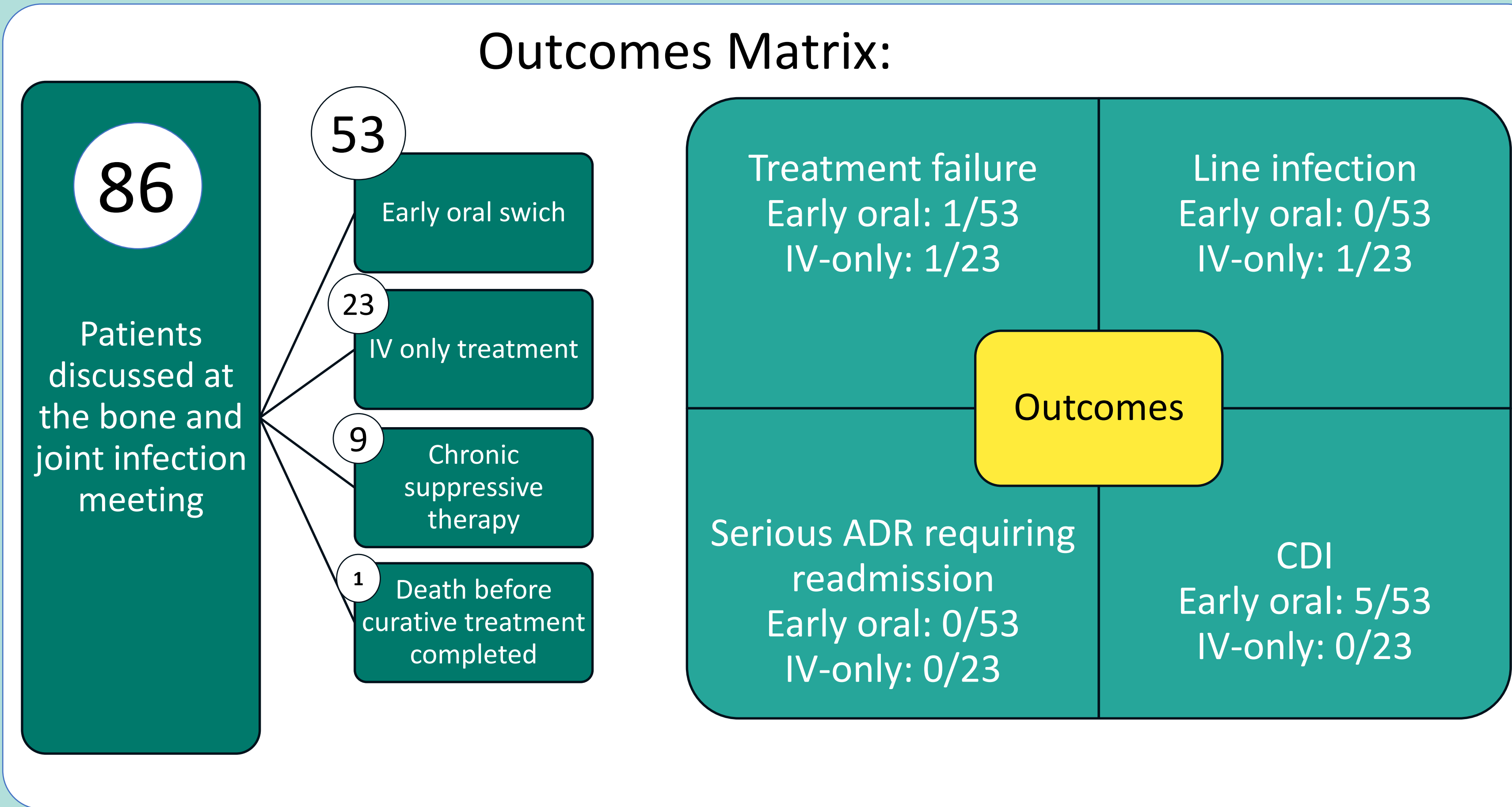
OBJECTIVE

Retrospective evaluation of outcomes for PJI patients managed by an MDT approach in a tertiary centre in Ireland; comparing continuation on IV therapy vs early oral switch.

METHODS

Patients discussed between January 2024 and March 2025 were included for review and followed for a year after their index infection. Patients managed with curative intent were divided between early oral switch (if there was a switch to PO therapy within 6 weeks of exchange arthroplasty, or 12 weeks of DAIR procedure) or those remaining on IV therapy , who were considered the IV group. Those receiving long term antibiotic therapy without curative intent were considered the chronic suppression group. Using electronic record data, primary outcomes were treatment failure at 1 year using OVIVA ¹ criteria. Secondary outcomes measured were Clostridium difficile infection (CDI), line infection & serious drug reactions requiring admission.

RESULTS



A total of 85 patients were discussed at MDT meetings: 53 were managed with early oral switch, 23 received IV-only therapy, 9 received suppressive oral antimicrobial therapy and 1 died during the index admission before completion of a curative antimicrobial strategy. Doxycycline was the most frequently used oral agent, prescribed in 58.8% oral-switch patients(n=30). Treatment failure occurred in one patient in the early oral

switch group and one patient in the IV group. There were no cases of serious adverse reactions requiring readmission in either group. Two early oral switch patients died after completing antimicrobial therapy from causes judged unrelated to PJI. One line infection occurred in the IV group. CDI occurred in 5 patients in the oral switch group, representing 9.8% of the group and 5.8% of the total cohort.

DISCUSSION/CONCLUSION

Although the study was not powered to establish non-inferiority compared with prolonged intravenous therapy, the findings are consistent with the growing evidence base supporting the use of appropriately selected high-bioavailability oral regimens in bone and joint infection. The absence of serious antimicrobial-related readmissions in either treatment group, together with the occurrence of line infection only in the IV-treated group, further supports the potential safety and service-delivery advantages of oral switch strategies when

applied within a structured specialist pathway. In addition, the small number of treatment failure events limits meaningful subgroup analysis by surgical strategy, organism, or antimicrobial regimen. Overall, these findings support the continued development of MDT-led oral switch pathways for selected patients with PJI, while highlighting the need for prospective evaluation of patient selection criteria, follow-up structures, adverse events, and healthcare utilisation outcomes.

REFERENCES

1. Li HK, Rombach I, Zambellas R, Walker AS, McNally MA, Atkins BL, et al. Oral versus intravenous antibiotics for bone and joint infection. *N Engl J Med*. 2019;380(5):425–436. doi:10.1056/NEJMoa1710926.