



Extended Maintenance Intervals for PICCs in Oncology A Retrospective Audit of Infection Outcomes

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INTRODUCTION BACKGROUND

Peripherally inserted central catheters (PICCs) are used to administer systemic anti-cancer therapy (SACT), particularly when treatment regimens are unsuitable for peripheral venous access (Nickel et al., 2024; Hallam & Denton, 2020). Catheter related bloodstream infections (CRBSIs) remain among the most serious complications associated with PICCs. Infections commonly arise from microorganisms colonising either the catheter hub or the skin surrounding the insertion site (Loveday et al., 2014; Muñoz-Mozas, 2023). Effective PICC maintenance including use of a sterile transparent semi-permeable membrane (TSM) dressing, decontamination of the needle-free connector (NFC) and regular flushing is essential in reducing infection risk (Loveday et al., 2014; DRIPP, 2023). Whilst recommendations are to change exit-site dressings every seven days or sooner if compromised, they provide no evidence-based direction on the optimal frequency of NFC changes or flushing intervals (Gavin et al 2016, Loveday et al., 2021; Nickel et al., 2024; DRIPP 2023).

During the COVID-19 pandemic we extended PICC maintenance intervals to minimise hospital visits for immunocompromised oncology patients.

CONCLUSION

Extending PICC maintenance intervals to 10 - 14 days for oncology patients appears safe, with no observed increase in CRBSI or exit-site infections in this audit.

This suggests that reduced catheter manipulation may lower contamination risk.

These results support the continued use of extended intervals and may inform future policy and practice.

AIMS AND METHODS

The aim of this audit was to evaluate whether extended PICC maintenance intervals increased infection risk in this patient population.

A retrospective audit compared infection outcomes between patients receiving standard weekly PICC maintenance in 2019 (pre-COVID) and those receiving 10–14-day maintenance in 2023 (post-COVID). Data from 460 patients in the pre-COVID cohort and 413 patients in the extended-interval cohort were reviewed.

RESULTS

7- Day (2019) vs Extended (2023)

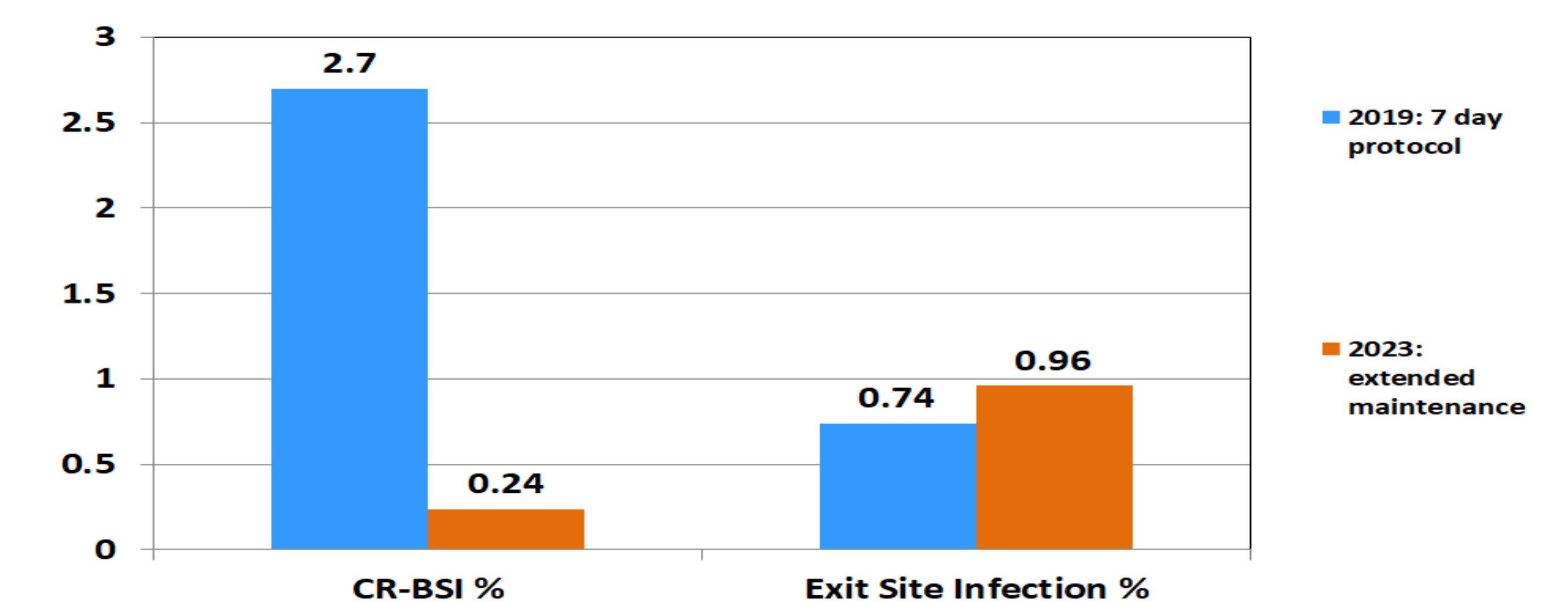
Patients: 402 vs 413

CRBSI: 11 (2.7%) vs 1 (0.24%)

Exit-Site infection: 3 (0.74%) vs 4 (0.96%)

*** No increase in infection with extended maintenance intervals***

Comparison of Infection Rates by Maintenance Protocol



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