



We assessed the effectiveness of switching from intravenous to oral antimicrobial therapy in cancer patients with CRBSI due to methicillin-sensitive *S. aureus* (MSSA)” Itoh et al (2018).

Abstract:

The most common complication in cancer patients is catheter-related bloodstream infection (CRBSI), of which *Staphylococcus aureus* is a common pathogen. Although *S. aureus* CRBSI patients are recommended for prolonged intravenous therapy, this is often not feasible. We assessed the effectiveness of switching from intravenous to oral antimicrobial therapy in cancer patients with CRBSI due to methicillin-sensitive *S. aureus* (MSSA). We conducted a retrospective observational study of 60 patients at one tertiary-care cancer center between April 2005 and March 2016. Patients who received effective intravenous (IV) antibiotics for at least 10 days (IV group) were compared to the IV group of patients who had switched to effective oral (PO) antibiotics after IV treatment for at least 10 days (IV + PO group). The primary endpoint was all-cause mortality within 90 days. Univariate and propensity score-adjusted multivariate logistic regression analyses using variables likely to influence the outcomes were performed. Of the 60 patients, 32 (53.3%) and 28 (46.7%) were in the IV and IV + PO groups, respectively. The median antibiotic treatment durations in the IV and IV + PO groups were 17 (13-31) and 33 (26-52) days, respectively ( $p < 0.001$ ). The 90-day mortality in the IV and IV + PO groups were 53.1% (17/32) and 10.7% (3/28), respectively ( $p = 0.001$ ). Univariate logistic regression model showed that the odds ratios of oral switch therapy for 90-day mortality was 0.106 (95% confidence interval [CI]: 0.027-0.423;  $p = 0.001$ ). The

propensity score-adjusted multivariate logistic regression model estimated the odds ratios of oral switched therapy for 90-day mortality as 0.377 (95% CI: 0.037-3.884;  $p = 0.413$ ). Our results suggest that oral switch therapy was not associated with mortality in cancer patients with CRBSI due to MSSA compared with no oral switch therapy. Oral switch therapy may be a reasonable option for patients with CRBSI due to MSSA.

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### Reference:

Itoh, N., Hadano, Y., Saito, S., Myokai, M., Nakamura, Y. and Kurai, H. (2018) Intravenous to oral switch therapy in cancer patients with catheter-related bloodstream infection due to methicillin-sensitive *Staphylococcus aureus*: A single-center retrospective observational study. *PLoS One*. 13(11), p.e0207413.

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