

Elsevier Editorial System(tm) for American Journal of Infection Control

Manuscript Draft

Manuscript Number:

Title: Letter to the Editor Re: Malach, T., Jerassy, Z., Rudensky, B., Schlesinger, Y., Broide, E., Olsha, O., et al. Prospective surveillance of phlebitis associated with peripheral intravenous catheters. Am J Infect Control, 2006;34:308-12.

Article Type: Letter to the Editor

Keywords:

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### Phlebitis associated with peripheral intravenous catheters

To the Editor,

Malach et al<sup>1</sup> suggest that presence of an intravenous peripheral catheter longer than 3 days is a risk factor for phlebitis. A point-prevalence research design was used in their study whereby patients with phlebitis were compared with an unmatched control group of patients who did not have phlebitis. There are significant problems with drawing strong conclusions from such a design, which the authors themselves acknowledge. Other prospective, longitudinal studies have found that it is within the first two days following peripheral catheter insertion that the patient is at highest risk for infection.<sup>2-3</sup> These authors surmise that breaching skin integrity, which occurs more frequently with 72 hour changes, may contribute to this result. We have supported their conclusions in a recent randomized controlled trial, where the incidence of phlebitis was similar in the 3-day change group and the change when clinically indicated group.<sup>4</sup> Among those who had their peripheral catheter removed for phlebitis, the mean length of time that the catheter was in-situ was 48.7 hours.

We believe, if patients are not matched for risk factors that may influence outcomes, incorrect conclusions may be drawn. This could have considerable patient care and economic implications. Consequently, it is important to use the correct study design when trying to understand significant health care questions.

1. Malach, T., Jerassy, Z., Rudensky, B., Schlesinger, Y., Broide, E., Olsha, O., et al. (2006). Prospective surveillance of phlebitis associated with peripheral intravenous catheters. *Am J Infect Control*, 34(5), 308-312.
2. Bregenzer, T., Conen, D., Sakmann, P., & Widmer, A. F. (1998). Is routine replacement of peripheral intravenous catheters necessary? *Arch. Intern. Med.*, 158(2), 151-156.
3. Homer, L. D., & Holmes, K. R. (1998). Risks associated with 72- and 96-hour peripheral intravenous catheter dwell times. *J. Intraven. Nurs.*, 21(5), 301-305.
4. Webster, J., Lloyd, S., Hopkins, T., Osborne, S., & Yaxley, M. (In Press 2006). Developing a Research base for Intravenous Peripheral cannula re-sites (DRIP trial). A randomised controlled trial of hospital in-patients. *Int J Nurs Stud*.