



To study a prospective cohort of patients receiving home infusion therapy to identify environmental and other risk factors for complications” Keller et al (2016).

Abstract:

BACKGROUND: Patients are frequently discharged with central venous catheters (CVCs) for home infusion therapy.

OBJECTIVE: To study a prospective cohort of patients receiving home infusion therapy to identify environmental and other risk factors for complications.

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DESIGN Prospective cohort study between March and December 2015.

SETTING: Home infusion therapy after discharge from academic medical centers.

PARTICIPANTS: Of 368 eligible patients discharged from 2 academic hospitals to home with peripherally inserted central catheters and tunneled CVCs, 222 consented. Patients remained in the study until 30 days after CVC removal.

METHODS: Patients underwent chart abstraction and monthly telephone surveys while the CVC was in place, focusing on complications and environmental exposures. Multivariable analyses estimated adjusted odds ratios and adjusted incident rate ratios between clinical, demographic, and environmental risk factors and 30-day readmissions or CVC complications.

RESULTS Of 222 patients, total parenteral nutrition was associated with increased 30-day readmissions (adjusted odds ratio, 4.80 [95% CI, 1.51-15.21) and CVC complications (adjusted odds ratio, 2.41 [95% CI, 1.09-5.33]). Exposure to soil through gardening or yard work was associated with a decreased likelihood of readmissions (adjusted odds ratio, 0.09 [95% CI, 0.01-0.74]). Other environmental exposures were not associated with CVC complications.

CONCLUSIONS: complications and readmissions were common and associated with the use of total parenteral nutrition. Common environmental exposures (well water, cooking with raw meat, or pets) did not increase the rate of CVC complications, whereas soil exposures were associated with decreased readmissions. Interventions to decrease home CVC complications should focus on total parenteral nutrition patients.

Reference:

Keller, S.C., Williams, D., Gavgani, M., Hirsch, D., Adamovich, J., Hohl, D., Krosche, A., Cosgrove, S. and Perl, T.M. (2016) Environmental Exposures and the Risk of Central Venous Catheter Complications and Readmissions in Home Infusion Therapy Patients. *Infection Control and Hospital Epidemiology*. October 4th. .

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