



“...evaluate the use of surveillance cultures (SCs) to prevent catheter-related bloodstream infections (CRBSIs) in asymptomatic hemodialysis (HD) patients.” Brañas et al (2014).

Reference:

Brañas, P., Morales, E., Ríos, F., Sanz, F., Gutiérrez, E., Quintanilla, N., Orellana, M.A., Sánchez, M., Rodríguez-Aranda, A. and Chaves, F. (2014) Usefulness of endoluminal catheter colonization surveillance cultures to reduce catheter-related bloodstream infections in hemodialysis. American Journal of Infection Control. September 20th. .

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Abstract:

BACKGROUND: To evaluate the use of surveillance cultures (SCs) to prevent catheter-related bloodstream infections (CRBSIs) in asymptomatic hemodialysis (HD) patients.

METHODS: In 2011-2012, we conducted a prospective study of HD patients with tunneled cuffed central venous catheters (TCCs). Colonization of the catheter lumen was assessed every 15 days by inoculating ~5 mL endoluminal blood into aerobic culture bottles. Individual patients were triaged based on SC results: group 1 (negative); group 2 (coagulase-negative

Staphylococcus with time-to-positivity (TTP) >14 hours); group 3 (CoNS with TTP ≤14 hours); and group 4 (any microorganism other than CoNS and any TTP).

RESULTS: We studied 104 patients (129 TCCs). Median follow-up was 262.5 days (interquartile range [IR], 135.0-365.0). A total of 1,734 SCs were collected (median, 18 per patient; IR, 10.0-24.0), of which 1,634 (94.2%) were negative (group 1) and 100 (5.8%) were positive (group 2: 79; group 3: 12, group 4: 9). In groups 2 and 3, 19 TCCs required antibiotic lock therapy (ALT). In group 4, all patients received intravenous therapy and ALT. Under this protocol, there were 0.27 episodes of CRBSI per 1,000 catheter days compared with 1.65 ($P < .001$) prior to its implementation.

CONCLUSION: SCs based on easily accessible samples proved useful in triaging HD patients at a high risk of infection.

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