

LETTER TO THE EDITOR

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***Legionella anisa* and hospital water systems**

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To the Editor,

Concerning the article by Yamamoto et al.¹ entitled "Isolation of *Legionella anisa* from multiple sites of a hospital water distribution system"; published recently in the *Journal of Infection and Chemotherapy*, the authors present a well-conducted survey of distal water sites in the water distribution system of their hospital in which *Legionella anisa* was isolated. Although the authors note that *L. anisa* has been associated with one case of hospital-acquired Legionnaires' disease,² we have found that, while *L. anisa* is a common colonizer of water distribution systems, it is an uncommon hospital-acquired pathogen.

The authors also suggested that replacement of contaminated showerheads was sufficient for *Legionella* eradication from the water distribution system. The authors found that flushing of hot and cold water sites for 15 min was insufficient to eradicate *Legionella* from the distal site. However, we point out that if the water temperature is raised to 70°C and the site is flushed with hot water for at least 30 min, this becomes an effective method of disinfection (superheat and flush).

Contrary to the authors' findings, numerous investigators, including ourselves, have found that showerhead cleaning or replacement is unreliable for eradicating *Legionella pneumophila* long-term from the water system.³ The reason is that the biofilm (composed of sediment and detritus) is not only within the distal water site but it also encircles the piping throughout the water distribution system. Removing only one small portion of this biofilm will not be useful for keeping the water distribution system free of contamination long-term.

We agree with Yamamoto and colleagues on the necessity of preemptive measures directed at the hospital water supply, although in their hospital situation, we would not initiate disinfection, given the fact that *L. anisa* rarely

causes infection (unlike *L. pneumophila*). We would, however, consider use of in-house *Legionella* cultures with special attention focused on Legionnaires' disease for pneumonias in immunosuppressed hosts; commercially available *Legionella* antibody tests and urinary antigen will not detect *L. anisa*.

Parenthetically, we noted that numerous case-control studies⁴⁻⁶ have refuted our original study⁷ that showering might be associated with transmission of *Legionella*. Most hospitals with experience with Legionnaires' disease now allow their patients to shower, as we do. We do not clean our showerheads (although we do apply system-wide disinfection with copper-silver ionization).

References

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