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> *Mycobacterium chimaera* infections among cardiothoracic...

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***Mycobacterium chimaera* infections among cardiothoracic surgery patients associated with heater-cooler devices—Kansas and California, 2019**

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Abstract

Background:

In 2015, an international outbreak of *Mycobacterium chimaera* infections among patients undergoing cardiothoracic surgeries was associated with exposure to contaminated LivaNova 3T heater-cooler devices (HCDs). From June 2017 to October 2020, the Centers for Disease Control and Prevention was notified of 18 patients with *M. chimaera* infections who had

undergone cardiothoracic surgeries at 2 hospitals in Kansas (14 patients) and California (4 patients); 17 had exposure to 3T HCDs. Whole-genome sequencing of the clinical and environmental isolates matched the global outbreak strain identified in 2015.

Methods:

Investigations were conducted at each hospital to determine the cause of ongoing infections. Investigative methods included query of microbiologic records to identify additional cases, medical chart review, observations of operating room setup, HCD use and maintenance practices, and collection of HCD and environmental samples.

Results:

Onsite observations identified deviations in the positioning and maintenance of the 3T HCDs from the US Food and Drug Administration (FDA) recommendations and the manufacturer's updated cleaning and disinfection protocols. Additionally, most 3T HCDs had not undergone the recommended vacuum and sealing upgrades by the manufacturer to decrease the dispersal of *M. chimaera*-containing aerosols into the operating room, despite hospital requests to the manufacturer.

Conclusions:

These findings highlight the need for continued awareness of the risk of *M. chimaera* infections associated with 3T HCDs, even if the devices are newly manufactured. Hospitals should maintain vigilance in adhering to FDA recommendations and the manufacturer's protocols and in identifying patients with potential *M. chimaera* infections with exposure to these devices.

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Footnotes

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