

C. auris outbreak linked to multiuse thermometers in UK ICU



New research from the UK suggests that multiuse patient equipment, such as thermometers, could help spread the fungal pathogen *Candida auris (C. auris)* in hospitalised patients, particularly those in intensive care units (ICUs). The findings were presented at the 28th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID).

Researchers examined one of the largest outbreaks of *C. auris*, which occurred in Oxford University Hospitals' Neurosciences Intensive Care Unit (NICU). Their investigation showed a major source for spreading the fungus was multiuse patient monitoring equipment, such as axillary thermometers, those used to measure temperature in the armpit. These thermometers had been used in 57 of the 66 patients (86 percent) who had been admitted to the NICU before being diagnosed with *C. auris*.

Use of these thermometers was still a strong risk factor for having *C. auris* after the research team controlled for other factors, such as how long a patient remained in the NICU, how unwell a patient was and their blood tests. Presenting author Dr. David Eyre from the Nuffield Department of Medicine at the University of Oxford said: "Despite a bundle of infection control interventions, the outbreak was only controlled following removal of the temperature probes."

Although seven of the study patients developed invasive infections, none died directly as a result of a *C. auris* infection. Most patients were colonised for between one to two months. There was no evidence that *C. auris* was associated with increased rates of death when adjusting for age, sex and the reason the patient had been originally admitted to the ward, according to the researchers.

C. auris is an emerging fungal pathogen, which means its presence is growing in the population and it can be responsible for infections in wounds and the bloodstream. The reasons for C. auris spreading are not well understood, but this study offers hope of controlling the fungus' rise.

Notably, the fungus tested during the study was resistant to common treatments. *C. auris* is typically resistant to many of the available antifungal drugs, including in Oxford to fluconazole and related drugs, as well as occasionally amphotericin. *C. auris* was rarely detected in the general ward environment. However, researchers were able to both culture samples from the medical equipment and see it on the surface of temperature probes using a scanning electron microscope.

Analysis of the fungal samples' genetic information revealed that the fungus found on the equipment matched those of the patients' samples. It appears that these fungi were able to survive on the hospital equipment despite hygiene standards in place.

"This reinforces the need to carefully investigate the environment, and in particular multiuse patient equipment, in any unexplained healthcare-associated outbreak," Dr. Eyre concluded. The team have successfully controlled the outbreak.

Source: European Society of Clinical Microbiology and Infectious Diseases

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