WATER QUALITY & HEALTH COUNCIL
PERSPECTIVES

Candida auris Infections: What You Need to Know about This Growing Global Health Threat

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A drug-resistant fungus originally identified in the *ear* of an elderly woman in Japan in 2009 is raising global health concerns. *Candida auris,* or *"C. auris"* ("*auris*" is Latin for "ear"), is a yeast that is considered an "emerging" pathogen because of rising numbers of infections reported around the globe. *C. auris* infections are common in medical centers, nursing homes, and long-term care facilities among people who are already ill. The Centers for Disease Control and Prevention (CDC) reports nearly half of all people who contract the fungal disease die within 90 days. CDC tracks *C. auris* cases reported in the U.S.

A strain of Candida auris cultured in a petri dish at CDC (photo courtesy of CDC)

Instead of spreading from place to place, the fungus appears to "pop up" simultaneously in disparate areas. Healthy people evidently have little to fear from this fungus, but CDC reports serious bloodstream infections in patients who: have been hospitalized for a long time; have a central venous catheter, or other lines or tubes entering their body; or have previously received antibiotics or antifungal medications. In addition to ears, the fungus can also infect wounds, blood, urine, the respiratory tract, and other body sites and devices (see CDC *Notes from the Field*). It can spread easily: once patients are infected, it is difficult to remove. To complicate the picture, specialized laboratory methods are required to accurately identify *C. auris*.

Drug Resistance

According to CDC, *C. auris* is often resistant to multiple antifungal drugs commonly used to treat other *Candida* infections. However, most *C. auris* infections are treatable with a class of antifungal drugs known as the *echinocandins*. Discovered by researchers screening fermentation products for new antibiotics, these are the first class of antifungal drugs that target the fungal cell wall, and are considered "a milestone achievement in antifungal chemotherapy," according to one study.

Disinfecting Surfaces against C. auris

Because *C. auris* causes outbreaks in healthcare settings, precautions are needed to halt its spread once identified, according to CDC. In addition to placing the patient in a single-patient room and using Standard and Contact Precautions, and adherence to hand hygiene, attention to cleaning and disinfecting the patient care environment and reusable equipment is key. CDC reports *C. auris* has been cultured from a wide variety of surfaces in patient rooms, ranging from nearby bedside tables and bedrails to more distant surfaces such as windowsills. Mobile equipment has also been found to be colonized. The World Health Organization recommends disinfection with a 0.1% chlorine bleach solution:

"Keep the environment clean. Clean with soap and water followed by disinfection with 0.1% bleach. Once the patient is discharged, cleanliness of the surfaces, floor, and wall must be ensured with soap and water, followed by 0.1% disinfection bleach."

CDC recommends disinfection with an EPA-registered hospital-grade disinfectant known to be effective against the spores of the hospital superbug bacterium, *C. difficile*. The active ingredient in most of these products is sodium hypochlorite (chlorine) bleach. Other effective active ingredients are hydrogen peroxide and peroxyacetic acid, but quaternary ammonium compounds are ineffective against *C. auris.*

Tackling C. auris in New York

New York City healthcare facilities, particularly those in the boroughs of Brooklyn and Queens, have been hard-hit by *C. auris* infection, and state officials are considering pre-admission patient screening, according to a recent article in the *New York Times*. Anyone colonized with *C. auris*, whether invasively infected or not, would be placed in isolation. Although costly and time-consuming, this measure could help stem the tide of deadly infection. As Dr. Tom Chiller, head of CDC's fungal division notes, "Going for it now makes sense. We have to see if we can stamp it out or keep it in check." We wholeheartedly agree, and look forward to updates on this global public health crisis.

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