SAN LUIS OBISPO COUNTY
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Candida auris - Emerging Drug-resistant Yeast

Responding to the emergence of multi-drug resistant bacteria, especially Carbapenem-resistant enterobacteria (CRE) and the more recently recognized polymyxin-resistant bacteria has been a significant challenge for both healthcare and public health experts. Now a pan-resistant yeast must be added to the list.

Since 2009, several countries have reported outbreaks of severe infections caused by ***Candida auris*** in hospitalized patients. This species is not found in many mycology textbooks and identification charts. In fact, an accurate identification may require the use of MALDI-TOF analysis (Matrix-assisted, laser-desorption-ionization, time-of-flight mass spectrometry) or DNA sequencing. This worrisome yeast might be easily misidentified as ***Candida haemulonii*** *or* ***Saccharomyces cerevisiae*** by common clinical microbiology identification systems such as API strips or the VITEK-2

Reports of blood stream, wound and ear infections have come from Japan, South Korea, India, Kuwait, Pakistan, South Africa, Colombia, Venezuela and the United Kingdom. A study conducted in the UK called the "Review on Antimicrobial Resistance" warned that overuse of fungicides on food crops may spawn resistance to antifungal drugs. http://amr-review.org/

Experts at the Centers for Disease Control and Prevention (CDC) have gathered information about this new pathogen and posted it on their website, but have not been able to discern the reason for the emergence, the environmental source, or the means by which it can colonize or invade human tissues. http://www.cdc.gov/fungal/diseases/candidiasis/candida-auris-qanda.html

What is known about this new agent are the following:

1. It is often multi-drug resistant. Available drug classes for yeast infections are limited, and isolates of ***C auris*** can be resistant to all classes, rendering therapy for deep-seated infection impossible. Mortality can be twice as high in these infections compared to antifungal susceptible infections.
2. Laboratory may misidentify ***C. auris***. If the cause of infection is not identified accurately, inappropriate therapy may be applied
3. Outbreaks are occurring in healthcare settings. If not recognized by accurate identification, measures to control the spread may not be mounted.

It has been known for decades that treatment of bacterial infections with broad spectrum antibiotics, especially in treatment settings such as cancer chemotherapy and immunosuppressive therapy, can result in a yeast—often ***Candida albicans***—superinfection. Focused investigations are warranted to determine the impact of these medical treatments on the emergence of ***Candida auris.***