

India & Candida Auris: The Deadly Infection Breeding in Hospitals

FIT speaks with three experts about the threat that hospital-acquired infections like Candida Auris pose for India.

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Snapshot

Increasing bacterial resistance to antimicrobial drugs has been a major public health concern lately. Scientists and doctors alike have been grappling with the question of curing ailments without the overuse or prescription of such medication.

In such a scenario, the emergence of a multi-drug resistant fungus, called Candida Auris, which breeds in hospital environments (where people are already suffering from a particular condition and thus, have weaker immunity), calls for immediate global attention.

FIT spoke to three experts, Professor Ramanan Laxminarayan, founder and director of the Center for Disease Dynamics, Economics & Policy (CDDEP) in Washington, D.C., Dr Isabel Frost, fellow at CDDEP, and Dr Sumit Ray, Chairperson, Critical Care Medicine, to understand the peculiar problem that it creates for a country like India; where the healthcare infrastructure is battling to even recognise AMR as a real threat.

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What is Candida Auris?

Center for Disease Control and Prevention (CDC) defines Candida Auris as “an emerging, multidrug-resistant yeast that causes invasive infections and is transmitted in healthcare settings”. First reported in Japan in 2009, it has already made its way across the globe, with cases being reported in India, Pakistan, United States, United Kingdom, Spain and South Africa, to name a few.

This fungus preys on people who have weaker immunity, such as newborns, elderly, diabetics, and patients admitted to the ICUs for particular medical conditions.

US Centre for Disease Control explains that the yeast can enter the bloodstream and puts hospitalized patients at a higher risk. The infection has been found in wounds, bloodstreams, ears, and even in urine and the respiratory tract.

What Makes it a Global Health Threat?

To put it simply,

1. It is multi-drug resistant, making several anti-fungal drugs redundant. Dr Isabel Frost explains, “The high levels of resistance in many *C. auris* isolates are a key

cause for concern and have lead therapeutic interventions to be ineffective in some patients.”

2. Detecting it with standard laboratory methods is difficult. Certain symptoms like fever, weakness and chest pain make it difficult to distinguish it from other health issues.

3. It is transmittable in hospital environments by contamination of spaces, sheets, clothes and equipment, infecting anybody who comes in physical contact.

4. It can be fatal. According to a Livemint [report](#), more than one in three patients with invasive *C. auris* infection die.

Professor Ramanan Laxminarayan shares, “*Candida* is more common than people realize. However, we don’t have systematic data on prevalence since very few hospitals report it in patients, let alone in the hospital environment.”

Where Does India Stand?

The earliest outbreak reported in India is from 2011. Numerous hospitals across the country and their critical care units have witnessed cases thereafter.

A [study](#) published in the Journal of Antimicrobial Chemotherapy, titled ‘*Candida auris* Candidaemia in Indian ICUs: Analysis of Risk Factors’, found, “Although *C. auris* infection has been observed across India, the number of cases is higher in public-sector hospitals in the north of the country.”

It is estimated that *C. auris* is the fifth among all candidaemia cases in Indian ICUs; reported first in Delhi.

Professor Laxminarayan stressed that hospital-acquired infections are a huge source of disease burden for the country. Even after such alarming numbers, the discussion and awareness regarding the infections continue to be minimal.

Dr Isabel Frost explains, “*C. auris* poses a challenge for India as it affects the most vulnerable patients and makes their conditions even harder to treat. Even for those that recover, this means they have longer hospital stays due to prolonged periods of sickness, and their illness will have a greater impact on their families in terms of treatment costs and lost wages due to missed days of work.”

What India Lacks: Awareness, Accuracy and Resources

Dr Sumit Ray, a critical care specialist, mentioned the concept of ‘attributable mortality’ to suggest that it is still difficult to reach an exact number of deaths due to the infection in India. Usually, the possibility is considered when despite observing improvements in other conditions that the patient is suffering with, his/her health continues to deteriorate.

Both Professor Laxminarayan and Dr Ray pointed towards the problem of the costs of these drugs. The former explained, “Echiocandin drugs are recommended for *C. auris* but the risk of resistance is a concern. The drugs are expensive.”

In India’s over-privatized system, financial strain on patients is already too much.

Dr Sumit Ray

Fungal infections are not a very large share of hospital-acquired infections, he adds. We become prone to these infections because of the overuse of antibiotics. “In the process of killing bad bacteria, we also kill the good ones. Prescribing strong antibiotics to a patient whose immunity is already compromised, or who has diabetes, for instance, increases their chances of getting infected.”

Dr Isabel further explained that India lacks the required resources and capital to test and treat such infections. “*C. auris* can be detected in ICUs using lab tests. However, many Indian hospitals do not have the facilities, resources, or staff time to do this. In fact, some of the most common technologies for identifying fungal strains can misidentify *C. auris* as another fungus which may have hindered control of this strain.”

What Can Be Done?

Measures to prevent and control the spread of the infection need to be taken at multiple levels. Dr Ray and Dr Frost mention a few.

1. At the hospital, we need proper infection control through regular cleaning, changing, sanitizing, using disinfectants etc.
2. Policies on the availability and prescription of these drugs need to be made and implemented to ensure that drugs are consumed only when necessary. Consumers should be asked to explain and provide evidence to be able to buy any such medication.
3. While such policies exist, their implementation needs to be made sterner. For instance, one can easily avail certain drugs off the counter today, without any assessment of their ‘need’ to consume them.

In addition, Dr Frost discusses the need for better and improved research in the area, even though studying antifungals may be difficult because “fungi are much more biologically similar to humans than bacteria are and so treatments are more likely to be toxic.”

“However, resistance to both antibiotics and antifungals is an emerging threat to global health and requires sustained efforts to develop new treatments.”

Professor Laxminarayan agreed that eventually, everything boils down to the problem of overuse of drugs.

We have a serious crisis. We need to make sure that we conserve the drugs we have while investing in new ones.

Prof Ramanan Laxminarayan

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