

## ***Candida auris* case in Karachi, a public health threat ahead**

Fauzia Imtiaz,<sup>1</sup> Moeez Tariq,<sup>2</sup> Syed Noor Ul Hasan<sup>3</sup>

Madam, *Candida auris* a multidrug-resistant nosocomial fungal pathogen is an emerging global public health threat. Since its discovery in Japan in 2009, the fungus has now affected more than 40 countries worldwide. It is a haploid microscopic fungus belonging to the Metschnikowiaceae family in the *Candida/Clavispora* clade.<sup>1</sup>

More commonly colonizing the skin, *Candida auris* is isolated from multiple infection sites and is generally acquired from hospital environments. The risk factors for contracting the fungus are immunodeficiency, diabetes mellitus, elderly age, previous surgery, indwelling medical device and the use of broad-spectrum anti-microbial therapy.<sup>1,2</sup> Unlike other *Candida* species, *Candida auris* is usually thermotolerant and osmotolerant which helps the pathogen to withstand environmental stresses.<sup>2</sup> The strains of *Candida auris* are resistant to common anti-fungal drugs like Fluconazole, Amphotericin B and rarely Echinocandin too, making it a significant and notorious member among other *Candida* species.<sup>1,2</sup> According to the Center for Disease Control and Prevention, *Candida auris* causes infections of bloodstream, ear and wounds. The most common symptoms of invasive infection by *Candida auris* are fever and chills that do not remit on antibiotic therapy. Diagnosis is mainly based on blood and urine cultures.<sup>3</sup>

Recently, a case was presented in a Public sector tertiary care hospital of Karachi in the paediatric age group. The patient was a six-year-old boy suffering with meningitis and septicemia and was admitted first in the ICU and subsequently in the ward. The patient got discharged after getting routine empirical therapies. The blood and urine culture taken during the stay was positive for *Candida auris*.

Previously, an outbreak reported in ICU patients in

.....  
<sup>1</sup>Department of Biochemistry, <sup>2,3</sup>3rd Year MBBS Student, Dow Medical College, Dow University of Health Sciences, Karachi, Pakistan.

**Correspondence:** Moeez Tariq. Email: MOEEZ.TARIQ18@DMC.duhs.edu.pk

**DOI:** <https://doi.org/10.47391/JPMA.5170>

Rawalpindi in 2018 was controlled by adopting staunch measures.<sup>4</sup> There is a paucity of recording and reporting outbreaks to the concerned health authorities in Pakistan. Moreover, lack of hygiene practices followed by patients and the attendants, and poor infection control measures have caused such outbreaks.

Pakistan, a developing country with minimal resources reserved for health, coped with three invasive waves of the deadly Coronavirus/COVID-19 pandemic. *Candida auris* manifests itself as a serious public health threat for the country. The policymakers should take swift actions related to this. Some steps that we recommend are that *Candida auris* infection should be declared as a prioritized notifiable disease and measures instituted for prompt reporting. Health care workers, including doctors, nurses, technicians, and medical students, should be aware of the disease's spread and prevention of the disease. These measures, once taken, can help reduce the disease burden, the development of anti-microbial resistant strains and exhaustion of the meagre healthcare budget.

**Acknowledgement:** None to acknowledge.

**Disclaimer:** None to disclose.

**Conflict of Interest:** None to disclose.

**Funding Disclosure:** None to disclose.

### **References**

1. Spivak ES, Hanson KE. *Candida auris*: An emerging fungal pathogen. *J Clin Microbiol.* 2018; 56:1-10.
2. Du H, Bing J, Hu T, Ennis CL, Nobile CJ, Huang G. *Candida auris*: Epidemiology, biology, antifungal resistance, and virulence. *PLoS Pathog.* 2020; 16:1-18.
3. Centers for Disease Control and Prevention. General Information about *Candida auris*. [Online] [Cited 2018 June 23]. Available from: URL: <https://www.cdc.gov/fungal/candida-auris/candida-auris-qanda.html>
4. Sana F, Hussain W, Zaman G, Satti L, Khurshid U, Khadim MT. *Candida auris* outbreak report from Pakistan: a success story of infection control in ICUs of a tertiary care hospital. Vol. 103, *The Journal of hospital infection.* England; 2019. p. 108-10.