**PM04**

**Antifungal susceptibility and method of azeole resistance in Candida albicans clinical isolates from oropharyngeal candidiasis patients in Iran**

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Poster paper

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Objectives: Oropharyngeal candidiasis (OPC) is the most frequent opportunistic fungal infection in head and neck cancer patients. This study was done to investigate the azeole susceptibility of Candidiasa albicans (C. albicans) from oropharyngeal candidiasis (OPC) patients and relationship between ERG11 gene mutations in these isolates and azeole resistance.

Methods: A total of 324 clinical isolates of Candida species were collected. Identification of the oral clinical samples was determined by culturing on CHROMagar, carbohydrate assimilation and ITS sequencing method. Azeole susceptibility was tested in vitro by microdilution method. The ERG11 genes of 42 isolates of C. albicans were amplified and sequenced. Results: Out of 324 isolates collected, 41.53% (135 isolates) were C. albicans. ERG11 gene was sequenced in 42 isolates. In total, 141 mutations were found in ERG11 gene from 42 isolates. Among them, ERG14 and ERG15a substitutions were most prevalent and were known to cause flucytosine resistance.

Conclusions: A total of 14 mutations in the ERG11 gene were identified in azole-resistant C. albicans isolates, which indicated as possible resistance mechanism to azole drugs and the occurrence of oropharyngeal candidiasis. Finding more mutations and relevance research studies with a higher number of samples.

**PM05**

**Candida albicans: isolate profiling and antifungal susceptibility testing experience from Jodhpur, Western India**

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Poster paper

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Objective: The study was undertaken over a 9-month study period at a tertiary care and super specialty hospital situated in Jodhpur, Western Rajasthan, India, with the following objectives:

1. To determine the prevalence of Candida among all blood culture patients.
2. Isolates profiling or speciation of Candida sp.
3. Antifungal susceptibility testing of the Candida isolates.

Methods: Automated blood culture bottles (BD BACTEC 460) that flagged positive were taken up for gram staining. Those bottles which showed gram-positive budding yeast cells with or without pseudohyphae were selected as the study isolates for candida. All such isolates were subjected to Sabouraud's dextrose agar and macerated aerobically at 37°C for 2-3 days. Crumbly, pale, white colonies of Candida were further taken up for identification by gram tube testing, CHROMagar, and VITEK-MS.

Antifungal susceptibility testing was performed for all isolates by VITEK 2 against, caspofungin, voriconazole, micafungin, flucytosine, and amphotericin B.

Results: Out of the study population of 1, 2021 January 31, 2021, the microbiology laboratory received a total of 10 841 automated blood culture bottles of which, overall, 1051 flagged positive. Building rooms were seen in 92 bottles.

The prevalence of candidiasis was found to be 1.84%. Building rooms made up 8.75% of all positive blood cultures. Conventionally and automated identification methods showed the Candida albicans made up the majority (84.87%) of isolates. Candida tropicalis (45.47%) was the most common species overall, followed by C. parapsilosis (13.77%), C. albicans (14.35%), C. guilliermondii (5.43%), C. glabrata (5.43%), and C. krusei (4.34%). Two isolates each of C. krusei, C. tropicalis, and Pichia spp. were also obtained.

The antifungal susceptibility testing results for the commonest species C. tropicalis showed susceptibility of 90% against caspofungin, 94% against micafungin, 37% for environmental and 41% for C. glabrata, and 67.5% against amphotericin B. C. albicans showed 100% susceptibility to caspofungin, and caspofungin, while C. parapsilosis showed a lower susceptibility percentage against all drugs in the panel. The two strains of C. albicans were solely susceptible to caspofungin.

Demography of the patients showed a male preponderance (M:F ratio was 2:1). The mean age of patients was 44 years.

Conclusion: The prevalence of candida in Jodhpur, Western India was found to be 1.84%, a figure much less than that reported from other tertiary care centers of the country. The commonest isolate was C. tropicalis (60.9%), as seen that reported from most Indian studies. Our isolates were largely (>90%) susceptible to the drug of choice, caspofungin, including the multidrug-resistant C. albicans strains. The study findings reflect a low prevalence of candidiasis, indicating adequate antifungal and antifungal stewardship practices at Jodhpur.

**PM06**

**Candida and non-Candida candidiasis in adult patients at a tertiary care set up in New Delhi, India**

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Objective: The aim of this study was to determine the species distribution, compare Candida albicans and non-C. albicans candidiasis, risk factors and antifungal susceptibility pattern of candidiasis cases in adult patients at a tertiary care hospital in New Delhi, India.

Materials and Methods: Candida species identification was performed by phenotypic methods, VITEK (Biomérieux, France), and DNA sequencing (PGM, Chuck.)

The antifungal susceptibility testing was performed by broth microdilution method as per CLSI M27-A4 guidelines 2017.

Results: Out of 2,724 blood samples, 78 samples (5.5%) yielded the growth of Candida species. There was a predominance of NAC, spp. over Candida albicans in candidiasis patients. C. auris (12.65%), 970 and non-Candida albicans (87.34%, 670) was isolated in this study. In non-Candida albicans, C. tropicalis (28.57%, 270) was the predominant Candida species followed by C. parapsilosis (14.12%, 137), C. glabrata (14.12%, 137), and C. krusei (5.43%, 53). The mean values of species among NAC spp. included C. auris, C. lusitaniae, C. lusitaniae, C. lusitaniae, C. parapsilosis, C. tropicalis, C. dubliniensis, and C. lusitaniae. The most common predisposing factor for C. auris and non-Candida albicans was aortic valves (5.73%, 103) followed by an increased period of hospitalization (48.22%, 308), diabetes mellitus (41.56%, 570), and the significance associated risk factor associated with C. auris was diabetes mellitus (P = 0.02).

The overall resistance was 22.77% to all antifungal drugs. The multidrug resistance (MDR) was noted in 71.5% of isolates.

Conclusion: Early identification of risk factors for candidiasis, species identification, and timely treatment are crucial for the outcome of candidiasis cases. Non-Candida albicans were predominant over C. albicans depicting the change in the epidemiology and emergence of MDR Candida spp. like C. auris, C. glabrata, C. lusitaniae, C. lusitaniae, and C. lusitaniae (C. krusei). This warrants routine monitoring of antifungal susceptibility (AFST) and dose optimization in the management of fungal infection.

**PS01**

**A case of leukocytosis sporotrichosis by infection of Sporothrix globosa**

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Poster paper

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Objective: Sporothrix is the leading subcutaneous mycosis causing by the Sporothrix (S. schenckii) subcomplex. S. globosa is the causative organism of fixed sporothrix in Korea. The preferred route of cutaneous sporothrix is intravenous for 3-6 months; however, there are few studies for leukocytosis sporothrix.

Methods: In 2018, we performed a histological examination of a patient who suffered sporothrix for 3 years and cultured part of the specimens. Despite various regions for years, improvement and evacuation were reported, so we took another skin biopsy and cultured it in 2021. Isolates from the 2018 and 2021 lesions were identified as S. globosa by ribosomal DNA analysis (SealLink biotechnology; Mishin Medical and TimaNihon Medical). The in vitro antifungal susceptibility tests were performed by broth microdilution method according to CLSI M2-A2 guidelines and fosfomycin yeast/μMdisk Manufacturer’s instructions. They were incubated at 30°C in a non-CO2 incubator for 7 days.

In 2018, histologically, inflammatory granulomas comprising lymphocytes, histiocytes, and giant cells, and several spores with periodic acid-Schiff (PAS) staining. Microscopic findings and ITS sequences of DNA gene were consistent with S. globosa. The antifungal susceptibility profile in 2018 revealed sensitivity to thiabendazole (0.125 μg/ml), and resistant to high MIC values for amphotericin B (8 μg/ml), itraconazole (16–32 μg/ml), voriconazole (32–64 μg/ml), and olsalazine (≥16 μg/ml). Treatment with voriconazole, itraconazole, or amphotericin B, the skin lesions were partially improved. In 2021, we took a new skin biopsy for laboratory examination. The histological examination results were the same as before. The antifungal susceptibility profile revealed sensitive to itraconazole (0.5 μg/ml), and high MIC for others. Clinically, skin lesions were not improved with the use of voriconazole 200 mg. Itraconazole 400 mg/d for 6 weeks reduced the lesions. However, there was no evidence of immune deficiency.

Conclusion: We experienced leukocytosis sporothrix which did not respond to itraconazole and voriconazole, and the sensitivity of antifungal was changed. In this case, the combination treatment including local heating, reticulated Ki may be considered, and frequent antifungal susceptibility tests are needed.