Poster Presentations

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Investigation of an outbreak of neonatal Candida emia in the NICU of a 300-bedded hospital in North India

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Objective: Neonatal Candidaemia causes significant morbidity and mortality in very low birth weight neonates. We report the occurrence of such outbreak of Candidaemia due to Candida furfur in the neonatal intensive care unit (NICU) of a 300-bedded hospital in India.

Methods: A total of 96 blood cultures from 80 neonates admitted in the NICU from October 2020 to April 2021 were received and processed manually in the Microbiology lab. A total of 15 among the 47 yeast isolates were sent to a teaching hospital for identification and antifungal susceptibility testing by matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF). Clinical parameters (very low birth weight, gestational age, both agerich, breast-surface area, antenatal corticosteroids, preterm delivery, small for gestation age, postnatal age at diagnosis, and maternal history of diabetes), laboratory parameters (white blood cell count, platelet count, serum C reactive protein, aspartate aminotransferase, alanine aminotransferase, bilirubin, urea, creatinine, and pH), treatments, outcomes and complications were recorded. Blood cultures were processed and those showing growth were subcultured onSabouraud dextrose agar and incubated at 37°C.

Results: Blood culture results. In all, 15 true positives (71.25%)/170 admitted to the NICU had positive blood cultures. A total of 47 true culture yielded non-albicans Candida spp. (82.4%, 47/56). The other main isolates from blood culture were Candida krusei (31/56, 5.6%), Candida glabrata (5/56, 8.9%), Candida albicans (3/56, 5.3%), and Candida lusitaniae (3/56, 5.3%).

Conclusion: We infer that the outbreak of neonatal Candidaemia was due to Candida furen in the NICU of a 300-bedded hospital in India.

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Rare Isolates from subcutaneous mycotic lesions: A study from tertiary care center in Chhattisgarh, India

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Objective: To identify the causative agents of suspected subcutaneous mycotic lesions patients attending to a tertiary care hospital, Chhattisgarh, India.

Introduction: Subcutaneous mycoses are a group of fungal infections of dermis and subcutaneous tissue caused by both isolated and mixed mycoses. It often affects patients with immunocompromised conditions. It consists of Aspergillus flavus, Candida albicans, Phialophora aphanis, Rhizopus microsporus, Trichophyton rubrum, and Disseminated Pneumocystis. It causes more substantial pathologic changes in the skin. Hence, it’s essential to be aware of such infections.

Methods: Thirty-two clinical specimens from the suspected subcutaneous mycotic lesions were studied. Male dominance was observed among the-to-be-studied patients. Among the 32 specimens, 10 showed positive for fungal identity: direct microscopy in 7, culture in 9, 5.72% positivity was observed in Culture and by both KOH test method and culture. Samples were processed and identified by using standard protocols.

Results: The most common fungal isolates were Candida albicans from cutaneous from bactera, Medcu spora from fine needle aspirate from the node of left breast, Rhizopus oryzae from right shoulder, Aspergillosis in the sample from the right tibia, Streptomyces in the sample from the right ankle, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, Aspergillus flavus, and Aspergillus fumigatus.

Conclusion: Candida furen is known to cause infections in the subcutaneous tissues. This case is different and rare. With the help of molecular techniques, it became possible to identify the pathogenicity and associated complications due to these fungal infections. It will also help to guide the therapeutic management and to know the geographic distribution of unusual fungal agents.

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Pelvic mycoses—an unusual presentation of Rhizophus arabicus in an immunocompetent patient

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Introduction: The rare but increasingly identified infections caused by Mucoraceae are almost detrimental to the patient due to rapid vascular invasions and the need for thorough surgical debridement and definitive antifungal therapy for its cure. Among the Mucoraceae, maximum cases have been reported among those present in soil. Rhizophus species are often identified in soil, air, and food, and are the major cause of invasive disease in humans. They are known to be the cause of severe infections in immunocompromised hosts. Treatment also was revised to include antifungal therapy after 3 weeks of 5mg adipine, i.e., after loading dose which was later shifted to oral dose after the loading dose was completed. A repeat UNI-URS was plano for ganciclovir, which identified the organism as Rhizophus arabicus. On follow-up, patient showed no clinical/radiological improvement and as view of the microbiological evidence, the antifungal was changed from voriconazole after 2 days to oral tericicline at the dose of 200 mg follows the loading after which significant improvement was achieved and patient was discharged.

Conclusion: Mucor infection in the form of spreading necrotic mass in an immunocompetent individual usually suggests the presence of Rhizopus doblomus. Treating patients only on clinical grounds without mycological confirmation may lead to overlooking of Mucor aesurus and may result in adverse outcomes. The diagnosis of Mucorales should always be considered as a differential for a fungal infection in the form of mass lesion in abdomen.

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Fungal keratitis caused by Pseudallescheria boydii Clinical and mycological characteristics

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Objective: Pseudallescheria boydii keratitis is rare but important type of fungal keratitis because of the ubiquitous nature of the organism to many existing antifungal agents. To present the clinical characteristics, risk factors, treatment, and prognosis of patients with P. boydii keratitis, and also present the antifungal sensitivities of the isolated strain. Methods: Two clinical cases of P. boydii keratitis were observed from June 2019 to June 2020. Results: Clinical examination hypopyon was seen in two patients. The main antifungal medications were oral and topical voriconazole. After treatment, visual acuity of all patients was normal. Conclusion: These patients hold the importance of determining causative organism of fungal keratitis and their antibiotic susceptibility. Culture findings are limited in identifying organisms. Sequencing of polymerase chain reaction- amplified DNA is good for accurate and rapid identification of species that can be helpful for optimizing treatment.