SARS-CoV-2-associated invasive fungal sinus infection; the Sri Lankan perspective

H Thabrew1, Liyannage Shanthini Madhumali Sigeera1, A P Anand1, R A D M Ramanayake1, Munisigawe M V M Muthiah1, W L N W Mithrakumara2, P J Jayasena1

1Manchester Surgical Infection Group, Canon Technical Facility, University of Manchester, Manchester, United Kingdom

2Department of Microbiology, University of Karapitiya, Galle, Sri Lanka

3Department of Mycology, Medical Research Institute, Colombo, Sri Lanka

5.5.6 SARS-CoV-2-associated invasive fungal sinus infection: the Sri Lankan perspective

Introduction: The spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has led to 663,426 reported cases with 18,764 deaths as of May 3, 2022. In Sri Lanka, the outbreak of the new Holocene COVID-19 caused by the novel coronavirus has led to the emergence of fungal sinusitis. In Sri Lanka, Sinhala is the main language and majority of the residents follow the Buddhist religion. Therefore, fungal sinusitis is a common and prevalent problem in Sri Lanka. Among the fungi, C. albicans is the most prevalent fungus isolated in clinical samples from patients with fungal sinusitis.

Objectives: The primary objective of this study was to describe the clinical presentation, diagnosis, and management of fungal sinusitis in Sri Lanka. The secondary objective was to identify the potential risk factors for fungal sinusitis.

Methods: A retrospective review of medical records of patients with fungal sinusitis was conducted at two tertiary care hospitals in Sri Lanka. The inclusion criteria were patients with fungal sinusitis confirmed by fungal culture or histopathology. The data were collected and analyzed using the Statistical Package for Social Sciences (SPSS) version 25.

Results: A total of 151 patients were included in the study. The mean age of the patients was 65.4 ± 16.3 years, and the majority of patients were male (65%). The most common fungal species isolated were C. albicans (64%), followed by C. tropicalis (20%) and C. parapsilosis (16%). The most common clinical presentations were nasal obstruction (80%), sinus pain (72%), and fever (60%). The most common risk factors identified were diabetes mellitus (32%), chronic sinusitis (22%), and immune compromise (18%).

Conclusion: Fungal sinusitis is a common and prevalent problem in Sri Lanka. C. albicans is the most prevalent fungus isolated in clinical samples from patients with fungal sinusitis. The most common clinical presentations were nasal obstruction, sinus pain, and fever. The most common risk factors identified were diabetes mellitus, chronic sinusitis, and immune compromise.

5.6 First report of pediatric blood stream infection due to Candida magnoliae in a known case of B cell ALL post-induction chemotherapy in Central India

Sushrutha Bhadra, Karuna Tapodani, Narmada Kumar Choudhary, Arati Bhadate

All India Institute of Medical Sciences, Bhopal, Bhopal

6.1 Antifungal Prophylaxis in Children with Cancer and HCT, September 2022, 4:22 PM - 6:15 PM

Objectives: Documentation and dissemination of findings of a rare fungal isolate in an immunocompromised child.

Methods: A case study with case fungal isolate in correlation to age, clinical condition, sample, and compatibility was done. A 4-year-old girl was admitted for routine management of her B cell acute lymphoblastoid leukemia. The patient continued on induction chemotherapy from January 2021. She was planned for consolidation in the last week of July and to rule out any infection blood and sinus samples were sent. Patial blood samples were received in pediatric automated BacT/Alert blood culture systems. However, C. magnoliae was available for the treatment of cryptococcosis, blastomycetes B, and Histoplasma. C. neoformans is widespread in nature, but environmental factors of Cryptococcus neoformans are largely unknown.

Methods: We aimed to find out the mechanisms of antifungal action against C. neoformans. The mechanical or biological agents that could be used for the treatment of cryptococcosis, blastomycetes B, and Histoplasma. C. neoformans is widespread in nature, but environmental factors of Cryptococcus neoformans are largely unknown.

Conclusions: This study demonstrates that fungal sinusitis is a significant entity in Sri Lanka with 34% proven mycositis in the sinus in the samples reported at the Medical Research Institute. SARS-CoV-2 PCR positive patients. Diabetes mellitus was seen in 31% of the COVID-19 associated invasive sinus infections. However, further studies are required to establish the effect of risk factors on infection.