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"Black Fungus Unveiled": Exploring the Menace and Medication

Sejal Telang, Shital Bansod, Arefa Sheikh, Nagma Khwaja

New Montfort Institute of Pharmacy, Ashti. Wardha, Maharashtra, India

Abstract: In recent years, there has been significant progress in treating mucormycosis. Beginning therapy as early as possible is crucial to achieve better outcomes. Therefore, maintaining a high level of suspicion and performing biopsies on possible lesions aggressively is essential. Whenever feasible, surgical removal of infected or necrotic tissue should be performed as the data supports its need. Lipid formulations of amphotericin B are now the standard treatment for mucormycosis as they are superior in safety and efficacy. Posaconazole may be useful as salvage therapy, but there is insufficient data to recommend it as the primary therapy. Preclinical and limited retrospective clinical data suggest that the combination of lipid formulations of amphotericin and echinocandin improves survival during mucormycosis. Therefore, additional studies are required to explore the potential of iron acquisition abrogation as an adjunctive treatment of mucormycosis. Combination polyene-posaconazole therapy was not beneficial in preclinical studies. For selected patients, adjunctive therapy with recombinant cytokines, hyperbaric oxygen, and/or granulocyte transfusions can be considered. Large-scale, prospective, randomized clinical trials are necessary to define optimal management strategies for mucormycosis.[1]

Keywords: Celosia argentea, emulgel, medicinal plants, gelling agent, co-surfactant, surfactant

REFERENCES

- [1]. RecentAdvancesintheTreatmentofMucormycosisBradSpellbergandAshrafS. Ibrahim
- [2]. Farmakiotis D, Kontoyiannois DP. Mucormycosis. Infect Dis Clin North Am. 2016;30:143-163.
- [3]. Adriaenssens K, Jorens PG, Meuleman L, Jeuris W, Lambert J. A black necrotic skin lesion in an immunocompromised patient. Diagnosis: cutaneous mucormycosis. *Arch Dermatol* 2000; **136**: 1165–70.
- [4]. Michalak DM, Cooney DR, Rhodes KH, Telander RL, Kleinberg F. Gastrointestinal mucormycosis in infants and children: a cause of gangrenous intestinal cellulitis and perforation. *J Pediatr Surg* 1980; **15**: 320–4.
- [5]. Nosari A, Oreste P, Montillo M et al. Mucormycosis in hematologic malignancies: an emerging fungal infection. *Haematologica* 2000
- [6]. Kontoyiannis DP, Wessel VC, Bodey GP, Rolston VI. Zygomycosis in the 1990s in a tertiary-care cancer center. *Clin Infect Dis* 2000; **30**: 851–6.
- [7]. Gugnani HC. A review of zygomycosis due to Basidiobolus ranarum. Eur J Epidemiol 1999; 15: 923–9.
- [8]. S. Nithyanandam, M.S. Jacob, R.R. Battu, R.K. Thomas, M.A. Correa, O. D'Souza
- [9]. Rhino-orbit-cerebral mucormycosis. A retrospective analysis of clinical features and treatment outcomes.
- [10]. Early diagnosis and monitoring of mucormycosis by detection of circulating DNA in serum: retrospective analysis of 44 cases collected through the French Surveillance Network of Invasive Fungal Infections (RESSIF) L. Millon, R. Herbrecht, F. Grenouillet, *et al.*
- [11]. Chakrabarti A, Singh R. Mucormycosis in India: unique features. Mycoses. 2014; 57: 85–90.
- [12]. Chander J, Stchigel AM, Alastruey-Izquierdo A et al. Fungal necrotizing fasciitis is an emerging infectious disease caused by Apophysomyces (Mucorales). Rev Iberoam Micol. 2015; 32: 93–98
- [13]. Farmakiotis D, Kontoyiannis DP. Mucormycosis. Infect Dis Clinf North Am. 2016; 30: 143–163.
- [14]. Kennedy KJ, Daveson K, Slavin MA, et al. Mucormycosis in Australia: contemporary epidemiology and outcomes. Clin Microbiol Infect. 2016; 22: 775–781.
- [15]. Sipsas NV, Gamaletsou MN, Anastasopoulou A, Kontoyiannis DP. Therapy of Mucormycosis. J Fungi (Basel). 2018;4(3):

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- [16]. Espinel-Ingroff A, Chakrabarti A, Chowdhary A, Cordoba S, Dannaoui E, Dufresne P, et al. Multicenter evaluation of MIC distributions for epidemiologic cutoff value definition to detect amphotericin B, posaconazole, and itraconazole resistance among the most clinically relevant species of Mucorales. Antimicrob Agents Chemother. 2015;59(3):1745.
- [17]. Cornely OA, Alastruey-Izquierdo A, Arenz D, Chen SCA, Dannaoui E, Hochhegger B, et al. Global guideline for the diagnosis and management of mucormycosis: an initiative of the European Confederation of Medical Mycology in cooperation with the Mycoses Study Group Education and Research Consortium. Lancet Infect Dis. 2019;19(12): e405–e21.
- [18]. M. Salehi, *et al.* Opportunistic fungal infections in the epidemic area of COVID-19: a clinical and diagnostic perspective from Iran
- [19]. A. Werthman-Ehrenreich Mucormycosis with orbital compartment syndrome in a patient with COVID-19.

DOI: 10.48175/IJARSCT-15222

- [20]. A. Spellberg, et al. Combination therapy for mucormycosis:
- [21]. D.M. Kamiński, Recent progress in the study of the interactions of amphotericin B with cholesterol and ergosterol in lipid environments
- [22]. P.C. Waldmeier, et al. Cyclophilin D as a drug target
- [23]. A zhar, et al. Mucormycosis and COVID-19 pandemic: clinical and diagnostic approach

