399. Multi-centre Observational Study on Epidemiology, Treatment, and Outcome of Mucormycosis in India
Atul Patel, MD, FIDSA1; Yoon Hwan Kwon, MD, FIDSA2; Jiangay Savio, MD3; Shripavanaksh Radunramnuth, MD4; Rakesh Singh, MD5; Prakash Shastri, MD5; Pamidimukkala Umabala, MD6; Raman Sardana, MD7; Anupama Jyoti Kindo, MD8; Malini Capoor, MD9; Sangreeta Mohan, MD10; and Arunalone Chakrabarti, MD, FIDSA11; Infectious Diseases, Veda. Inst. of Med.Sci, Ahmedabad, India, 1Department of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, Texas, 2Department of Microbiology, Texas Tech University Health Sciences Center, Lubbock, Texas, 3Department of Microbiology, University of Ibadan, Ibadan, Nigeria, 4Department of Microbiology, Lady Reading Hospital, Lahore, Pakistan, 5Department of Microbiology and Lab Medicine, Christian Medical College, Ludhiana, India, 6Department of Microbiology, All India Institute of Medical Sciences, New Delhi, India, 7Clinical Microbiology, Professor, Vellore, India, 8St. John’s Medical College Hospital, Bangalore, India, 9Department of Microbiology, JIPMER, Puducherry, 10Intensive Care Medicine, Sir Ganga Ram Hospital, New Delhi, India, 11Department of Microbiology, Niraj Institute of Medical Sciences, Hyderabad, India, 12Department of Microbiology, Indraprastha Apollo Hospital, New Delhi, India, 13Department of Microbiology, Sri Ramachandra Medical College, Chennai, India, 14Department of Microbiology, Postgraduate Medical College Hospital, King George Medical University, Lucknow, India, 15Christian Medical College, Ludhiana, India, 16Medical Microbiology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

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Background. Though the rise in number of mucormycosis cases has been reported globally, the rise in India is alarming especially in uncontrolled diabetics. However, data on the gaps exist in the understanding of the disease in this country.

Methods. To describe the epidemiology, diagnosis, treatment practices, and outcome of mucormycosis in India. A single-arm prospective observational study was conducted in the network of 17 tertiary care centres across India during April 2016 through September 2017. All consecutive proven mucormycosis patients were enrolled in this study. Clinical data including risk factors, investigations, and treatment were collected. All isolates and histopathological specimens were sent to Mycology Reference Laboratory at Chandigarh for final identification (phenotypic and sequenc ing) and drug susceptibility testing.

Results. A total of 474 cases were enrolled between the study period. Rhin orbito-cerebral mucormycosis was common (42.7%) presentation with 22.8% patients had brain involvement, followed by pulmonary (14.6%), cutaneous (11.8%), isolated renal (3.9%), and intra-abdominal (2.8%) mucormycosis. The underlying disease or predisposing factors were noted in 79.7% cases (diabetes melitus 12.4%, diabetes mellitus 10.3% trauma or history of surgery, 9.7% malignancy, and 9.2% transplant). The most common agents isolated were Rhizopus species (75.9%, R. arrhizus [74.3%] and R. homothallicus [6.7%]) followed by Apophysomyces variabilis (7.4%), Mucor species (6%), and Lachaimia ochracea (5.9%). The patients were managed by medical therapy in 82.8%, surgery in 56.8% while 51.7% received combined medical and surgical management. Amphotericin B (96.8%) either lipid formulations (65.7%) or conventional form (39.1%) was the common antifungal used. The mortality of patients was 30.4%, of which, 80.3% patients died within 6 weeks of their diagnosis. 24.3% patients left hospital against medical advice while 50.1% survived.

Conclusion. Rhino-orbital-cerebral mucormycosis in uncontrolled diabetics is common presentation in India. R. arrhizus followed by A. variabilis are common species isolated from these patients. Survival was noted only in half of the patients despite increased awareness and diagnosis.

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400. The Frequency and Clinical Characteristics of Positive Galactomannan Assay Results in Patients with Mucormycosis
Sungim Choi, MD1; Joon Seon Song, MD2; Hui Hyun Moon, MD2; Jang Wan Park, MD3; Kyung Hwa Jung, MD4; Kyoeong Min Jo, MD5; Jiwon Jung, MD6; Min Jae Kim, MD7; Yong Pil Chong, MD7, PhD8; Young Soo Park, MD7, PhD8; Sang-Oh Lee, MD9; Sang-Kyung Kwon, MD10; Sun Hee Kang, MD10; Sang-Hoon Kim, MD10; Sung-Han Kim, MD10, PhD10; 1Department of Infectious Disease, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, Republic of (South), 2Pathology, Asan Medical Center, University of Ulsan College of Medicine, Songpa-gu, Seoul, Korea, Republic of (South), 3Internal Medicine, Ulsan University Hospital, Ulsan, Korea, Republic of (South)

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Background. Discrepancies between histomorphologic finding and indirect test results such as galactomannan (GM) assay make diagnosis of invasive fungal infection difficult. We investigated the frequency and clinical characteristics of positive GM assay results in patients with mucormycosis.

Methods. Patients who met the modified criteria for proven or probable mucormycosis and had serum and/or bronchoalveolar lavage (BAL) GM fluid GM assay result were enrolled at a tertiary hospital from July 2009 to October 2017. Proven mucormycosis was defined as histologic evidence of tissue invasion of hyphae with positive mucormycosis immunohistochemistry (HIC) test result and the recovery of agents of mucormycosis from mold cultures. A positive GM assay was defined as a positive galactomannan test result. Probable mucormycosis was defined as histologic evidence of tissue invasion of hyphae with positive mucormycosis HIC test result with or without recovery of agents of mucormycosis by culture from nonsputum specimen.

Results. Among 50 patients of proven or probable mucormycosis, 20 (40%) patients were positive for serum and/or BAL fluid GM assay results; 13 of 20 (65.0%) were positive in serum, nine of 12 (75.0%) were positive in BAL fluid, and two of 12 (16.7%) were positive in both. There were more patients with gastrointestinal infections (4 of 20 [20%] vs. 0 of 30 [%], P = 0.021) and diagnosed as histomorphologically aspergillosis (6 of 20 [30%] vs. 1 of 30 [%], P = 0.012) in GM positive group than GM negative group.

These results suggest that positive GM assay results are not uncommon in mucormycosis. GM assay results from the patients with mucormycosis appear to be related with gastrointestinal infections and histomorphologic diagnosis of aspergillosis. Further studies are needed on the mechanism of positive GM results in patients with mucormycosis and possible confection with other fungi such as Aspergillus species in these patients.

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