malignancy or hematopoietic stem cell transplant (HSCT) (11 patients), use of immunosuppressing medications (11 patients), and invasive procedures (9 patients). At the time of diagnosis, only six patients were on an antifungal with mold activity. Eight patients died during hospitalization. The distribution of cases over time was compared with weather data for Colorado. A cluster of cases occurred in 2013 (6 cases) and in 2017 (8 cases). A majority of cases were diagnosed during the summer and fall months with July being the month with the most number of cases. There were higher levels of precipitation that occurred prior to or during the cluster of cases.

Conclusion. Cases of mucormycosis at UCH were associated with DM, hematologic malignancy, or immunosuppressive therapy. The majority of cases were diagnosed during the summer and fall months. The increase of cases seen 2013 and 2017 occurred in the summer and fall months after higher levels of precipitation were observed in Colorado. Providers at UCH may consider modifying antifungal prophylaxis to include mold coverage in patients with ≥2 risk factors for mucormycosis who are admitted during the summer and fall.

Disclosures. M. Barron, Astellas Pharma: Investigator, Research support.

399. Multi-centre Observational Study on Epidemiology, Treatment, and Outcome of Mucormycosis in 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, the true gap lies 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 treatments were collected. All isolates and histopathological specimens were sent to Mycology Reference Laboratory at Chandigarh for final identification (phenotypic and sequencing) and drug susceptibility testing.

Results. A total of 581 cases were enrolled between the study period. Rhinorbito-cerebral mucormycosis was common (42.2%) presentation with 22.8% patients with renal (3.9%), and intra-abdominal (2.8%) mucormycosis. The underlying disease of patients, which were more noted in 79.7% cases (84.9% diabetes mellitus, 12.2% malignancy, 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. homothallus [6.7%]) followed by Apophysomyces variabilis (7.4%), Mucor species (6%), and Lichtheimia [6%]. The patients were managed by medical treatment in 82.8%, surgery in 56.8% while 51.7% received combined medical and surgical treatment. Amphotericin B (96.8%) either lipid formulations (65.7%) or conventional (35.3%) was used in 82.8%, surgery in 56.8% while 51.7% received combined medical and surgical treatment. The overall mortality rate was 50.1% (30 of 59 patients). Of the 59 patients who died during hospitalization, the distribution of cases over time was compared with weather data for Colorado. A cluster of cases occurred in 2013 (6 cases) and in 2017 (8 cases). A majority of cases were diagnosed during the summer and fall months after higher levels of precipitation were observed in Colorado. Providers at UCH may consider modifying antifungal prophylaxis to include mold coverage in patients with ≥2 risk factors for mucormycosis who are admitted during the summer and fall.

Disclosures. M. Barron, Astellas Pharma: Investigator, Research support.

400. The Frequency and Clinical Characteristics of Positive Galactomannan Assay Results in Patients with Mucormycosis
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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 received serum and/or bronchoalveolar lavage (BAL) 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 (IHC) test result and the recovery of agents of mucormycosis (Mucor spp., Absidia spp., Apophysomyces spp., Saksenaea spp., and Rhizopus spp.) by culture from sterile specimens. Probable mucormycosis was defined as histologic evidence of tissue invasion of hyphae with positive mucormycosis IHC test result with or without recovery of agents of mucormycosis by culture from nonsterile specimens.

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 [0%], P = 0.021) and diagnosed as histopathologically aspergillosis (6 of 20 [30%] vs. 1 of 30 [3%], P = 0.012) in GM positive group than GM negative group.

Conclusion. 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 contamination with other fungi such as Aspergillus species in these patients.

Disclosures. S. H. Kim, the Korea Health Technology R&D Project through the Korea Health Industry Development Institute (KHIDI): Investigator, Grant recipient.