**Objectives**

Mucormycosis is a rare mold infection caused by filamentous fungi of the order Mucorales. It is associated with very high morbidity and mortality. We aim to present the pediatric cases of mucormycosis registered in the Zygomyco.net database, which is an official global Zygomycosis registry under the auspices of both the European Confederation of Medical Mycology (ECMM), and the International Society for Human and Animal Mycology (ISHAM).

**Methods**

We analyzed all pediatric mucormycosis cases (up to 19 years of age) that had been prospectively recorded in the Zygomyco.net database during the period 2009-2022 (14 years). Extensive patient data included demographic information, clinical history, diagnostic procedures, treatment modalities / regimens and patient outcomes.

**Results**

Among all 382 cases registered in this global registry, 59 (15.4%) were pediatric cases reported from 10 countries [male/female ratio 1.1 (31/28), median age 12 years [interquartile range (IQR): 7.5-16 years]. Malignancy was the most common underlying condition (62.7%). Among the 37 cases with malignancies, 29 were hematological malignancies (acute lymphoblastic leukemia 15, acute myeloid leukemia 8, myelodysplastic syndrome 1, juvenile myelomonocytic leukemia 1, non-Hodgkin lymphoma 2, not specified 2; nine among the 29 underwent hematopoietic stem cell transplantation), and 8 were solid tumors (neuroblastoma 3, brain tumors 2, germinomas 1, bone sarcoma 1, not specified 1). Non-malignant underlying conditions (14/59) were: diabetes mellitus 3, solid organ transplantation 3, congenital heart disease 2, birth prematurity 1, systemic lupus erythematous 1, cholesteatoma 1, severe acute respiratory infection by influenza virus 1, not specified 2. Among these 14 cases, 3 were receiving corticosteroids and 3 were neutropenic. In 8 cases there were no underlying diseases, but in 1 case extended necrotic lesions were developed following an explosion accident, 1 had concomitant chickenpox and 1 had appendicitis with gangrenous bowel loop with sepsis - intestinal obstruction. The primary clinical presentations were disseminated disease (30.5%), pulmonary (25.4%), rhino-cerebral (20.3%), and cutaneous (15.3%) mucormycosis. *Rhizopus* was the leading fungal genus (52.4%), followed by *Lichtheimia* (19%), *Mucor* (4.7%) and unspecified Mucorales 21.4% . Antifungal therapy, primarily with an amphotericin B formulation, combined with surgery, was the most common therapeutic approach. Overall mortality was high (45.6%), while mortality attributed to mucormycosis was 33.3%, particularly in disseminated or advanced rhino-cerebral cases.

**Conclusions**

Mucormycosis in children is rare but associated with significant morbidity and high mortality. Global registries play a vital role in defining epidemiological parameters and developing targeted strategies for early detection and timely interventions and enhancing overall survival rated.