Mucormycosis: Ten-year experience at a tertiary-care center in Turkey

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Background:. Mucormycosis is a rare invasive fungal infection most commonly encountered in immunocompromised host. Risk factors for the development of mucormycosis include poorly controlled diabetes or diabetic ketoacidosis, prolonged neutropenia, renal disease, liver cirrhosis, high dose steroids, malignancies such as leukaemia and lymphoma. Mucormycosis may also affect immunocompetent patients with trauma, burns or patients under deferroxamine treatments.

Aggressive surgery combined with systemic antifungal treatment is the main applied treatment modalities. Despite these treatments, mortality and morbidity rates are high. Early diagnosis, underlying disease, form of mucormycosis are determinative factors for prognosis . In recent years, mucormycosis appears to be increasing worldwide. Thus, we aimed to analyse the local epidemiology and outcome of mucormycosis in our center.

Methods: We analysed 51 adult patients treated for mucormycosis between 2003-2013 recorded at a tertiary university hospital in Turkey. We examined the following data for all patients: age, gender, predisposing disease, symptoms, treatment, surgical procedure,, concomittant infections, intensive care requirement and outcomes.

Results: During the study period 51 cases of mucormycosis were documented, 55% were female. The mean age was 44,8 ± 18,4 years. The rhinocerebral presentation is reported in 94% of patients. Surgery was performed in 94,1% patients. Almost all of patients (88%) have at least one risk factor. The common predisposing factors were hematologic malignencies (53%), diabetes mellitus (29%) and solid malignencies (6%). The most common initial symptoms were fever, cellulitis and facial pain.

Overall 81% of patients had surgery. Mortality was 52,9%. Liposomal amphotericin B versus conventional amphotericin B and absence of fever were associated with a reduced risk of mortality. In addition, facial pain complaint was related with favorable outcome, this condition may be linked with early diagnosis.

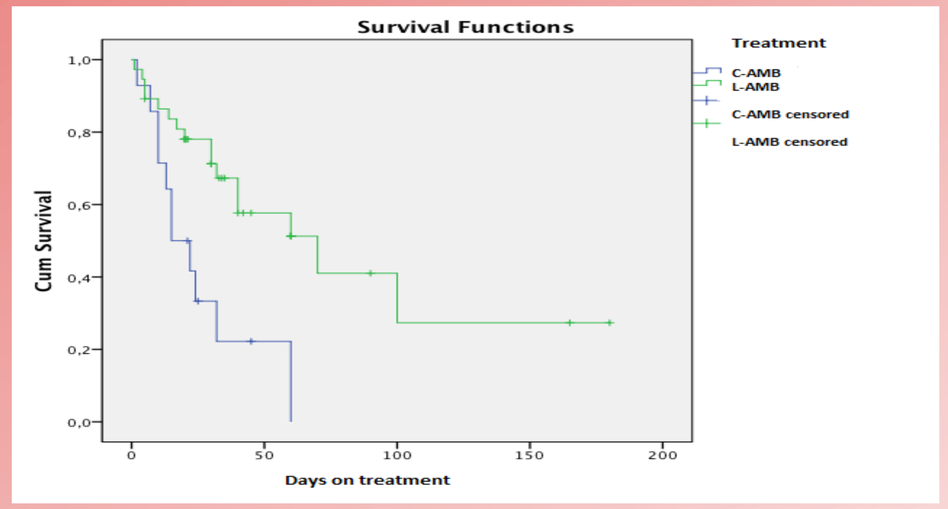


Figure 1. Comparision of survival functions between patients treated with C-AMB and L-AMB.

Conclusion: In conclusion, our study revealed that mucormycosis continues to be mortal disease in about half of the cases. Our findings indicate that treatment with L-AMB is associated with favourable response. Also in case of facial pain low mortality rate may indicate the importance of early diagnosis. Though high mortality rates, early and rapid medical treatment combined with surgery seems to be promising for mucormycosis patients.