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Invasive aspergillosis

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ABSTRACT

Background and Aim: Invasive aspergillosis is a life-threatening fungal disease that causes high morbidity and mortality in patients withsuppressed immune system. The most common *Aspergillus* species that cause invasive aspergillosis are *Aspergillus fumigatus*, followed by *Aspergillus terreus* and *Aspergillus flavus*. *Aspergillus* can cause a wide range of clinical syndromes from a simple colonization to an invasive form. The most common form of thisdisease is pulmonary aspergillosis, and *Aspergillus fumigatus* is the cause of most cases of pulmonary aspergillosis. Several pathogenic factors of *Aspergillus fumigatus* are known.Neutropenia is the mostcommon risk factor for this disease. Despite the increasing prevalence of invasive aspergillosis, rapid, accurate diagnosis and treatment of this disease are still important. Due to the wide range of non-specific clinical signs as well as the shortcomings of current diagnostic techniques, most patients are diagnosed either as "possible" or "probable" cases. In addition, due to the lack of sensitive and specific tests, many high-risk patients received an experimental or long-term treatment of antifungal drugs that are also expensive, which led to drug-induced side effects and the possibility of fungal drug resistance going up. More accurate diagnostic techniques, along with targeted antifungal therapy, are essential requirements to reduce the morbidity and mortality of invasive aspergillosis.

Conclusion: In this review, invasive aspergillosis is surveyed in terms of causes, epidemiology, clinical forms, diagnosis, and treatment. Also, the latest developments in the diagnosis tests and treatment of this infection are studied.

Keywords: Invasive aspergillosis, *Aspergillus*genus, *Aspergillus fumigatus*, Diagnosis, Treatment

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