Burden of serious fungal infections in Austria, Abstract No. 757

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Abstract

Introduction
The number of fungal infections occurring each year in Austria is not known. We have estimated these based on population at risk, supplemented with existing data. Methods
All published epidemiology papers reporting fungal infection cases from Austria were identified. Results
Of the 8,250 population, 13% are children (0-14 years) and 16% of population are >65 yrs old. We therefore estimate that 100,080 Austrian women get recurrent vaginal thrush (14-15%)
(1). Furthermore, most infections are caused by the genera Candida, Aspergillus and Cryptococcus. The incidence and severity of IDI are dependent on a variety of factors, including increase use of immuno-suppressive agents, chemotherapy drugs, invasive devices and grafts and hyperalimentations. Improvements in medical care have resulted in critically ill people surviving longer, rendering them vulnerable to IDI. Epidemiology of IDI in Austria is still mostly based on single institution reports or multiple center studies rather than from multi-national reports. Fungal infections are a significant threat to every person, with the collective burden of disease being largely unrecognized. True rates are unknown because of a lack of good epidemiology data from many countries. And while mortality rates are often given, it is important to understand the impact of IDI on a patient's quality of life and on families who must care for someone with IDI. Even with this basic understanding, most serious fungal infections are not being employed as a consequence of other health problems such as asthma, HIV, cancer, transplantation and therapeutic interventions. For example, patients with chronic obstructive pulmonary disease have an increased risk of developing invasive aspergillosis, whereas patients with neurological disorders and lung cancer have been associated with a greater risk of invasive fungal infections. Hence, we have estimated fungal infections based on population at risk, supplemented with existing data from several sources.

Material and Methods
All published epidemiology papers reporting fungal infection cases from Austria were identified. We also extracted reported from the international Classification of Diseases (ICD) from Ministry of Health in Austria. When no data were available, we used national population and fungal infection frequencies in those population to estimate national incidence or pneumonia. Additional IDI data from Austria, German (Bavaria) and USA were also used from several studies.

Results

We estimated that there are about 100,000 cases of C. albicans peritonitis in Austria. This is an underestimate of the true burden of disease, as patients are unlikely to seek medical care for this condition.

Discussion

Austria is a well-developed country of roughly 8.2 million people in Central Europe. The Austrian healthcare system is characterized by a high density of early accessible health care facilities, in 2009, a total of 260 hospitals with at least 4 bed machine were suitable for inpatient care. The most common otolaryngology departments are based in major medical centers and are available 24 hours a day. Austria is a high-risk country for fungal infections, with the highest burden of disease in the world. As such, the burden of fungal infections in Austria is likely to be underestimated due to the limited availability of data sources. Furthermore, the database is not comprehensive and does not include patients who are not hospitalized. Therefore, the estimates provided in this study are likely to be underestimated. Nonetheless, the results of this study provide a useful framework for future research and for the development of targeted prevention and control strategies.

Conclusions

The results of this study suggest that fungal infections are a significant public health problem in Austria. Further research is needed to better understand the epidemiology of fungal infections in this country and to develop effective prevention and control strategies.

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