WMA STATEMENT ON FUNGAL DISEASE DIAGNOSIS AND MANAGEMENT

Adopted by the 64th WMA General Assembly, Fortaleza, Brazil, October 2013 and reaffirmed with minor revisions by the 224th WMA Council, Kigali, Rwanda, October 2023

PREAMBLE

According to WHO Fungal Priority Pathogens List (WHO FPPL), fungal pathogens are a major threat to public health as they are becoming increasingly common and resistant to treatment. Moreover, emerging evidence suggest that global warming and the rise in international travel and trade are contributing to the worldwide expansion of fungal diseases, in both incidence and geographic range.

Invasive and chronic fungal diseases lead to estimated annual morbidity rates that are similar to those caused by commonly recognized global health concerns such as malaria and tuberculosis. In addition to death, these fungal diseases commonly lead to chronic ill health, including blindness with keratitis, respiratory distress with allergic bronchopulmonary aspergillosis (ABPA), severe asthma with fungal sensitisation (SAFS) and chronic pulmonary aspergillosis (CPA), weight loss and nutritional deficiency with oesophageal candidiasis and CPA, and inability to engage in healthy sexual activity with vulvovaginal candidiasis.

Serious fungal diseases are often opportunistic, occurring as a consequence of other conditions that suppress the immune system, such as asthma, AIDS, cancer, post–transplant immunosuppressive drugs and corticosteroid therapies.

Even though many fungal diseases can be treated relatively simply, in many cases, these diseases go untreated. Fungal infections alone are often not distinctive enough to allow a clinical diagnosis, and as cultures are frequently falsely negative, missed diagnoses are common. In addition, a relatively narrow diagnostic window to cure the patient is frequently missed, resulting in prolonged expensive hospital stays, often with a fatal outcome. Lastly, effective medicine to treat fungal infections are often not available when and where they are needed.

Despite the increasing concern, WHO emphasizes the inadequate attention and resources allocated to fungal infections, resulting in a lack of reliable data regarding the distribution of fungal diseases and patterns of antifungal resistance. Consequently, *"the exact burden of fungal diseases and antifungal resistance, are unknown, and the response is therefore undermined"* [1].

RECOMMENDATIONS

1. In line with WHO Fungal Priority Pathogens List (WHO FPPL), the WMA recommends strategies aimed at generating evidence and improving response to fungal pathogens including preventing the development of antifungal drug resistance, and in particular urges governments as well as other health stakeholders concerned to:

    - ensure that both diagnostic tests and antifungal therapies are available for their populations;
    - depending on the prevalence of fungal diseases and their underlying conditions, guarantee the provision of specific antigen testing or microscopy and culture;
    - ensure the availability of these tests, and of health personnel educated to administer and interpret the tests, in all countries where systemic fungal infections occur;
    - consider developing diagnostic centre of excellence with ~~a~~ sufficient health personnel with adequate education on fungal infections diagnosis;
    - provide monitoring for antifungal toxicities;
    - support medical associations in developing adequate medical courses to ensure an effective diagnostic approach of fungal infections.

2. The WMA encourages its constituent members to undertake and support epidemiologic studies on the burden of fungal disease in their country and to inform the national government of the results.

[1] WHO releases first-ever list of health-threatening fungi.