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Fungal Infections – Primary Prophylaxis

Recommendations from the society for diagnosis and therapy of haematological and oncological diseases

DGHO Deutsche Gesellschaft für Hämatologie und Medizinische Onkologie
ÖGHO Österreichische Gesellschaft für Hämatologie & Medizinische Onkologie
SSMO SSOM SGMO
SGH+SSH

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Fungal Infections – Primary Prophylaxis

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Compliance rules:

- Guideline
- Conflict of interests

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on behalf of the AGIHO Infectious Diseases Working Party of the DGHO

1 Definition and Basic Information

The rising incidence of invasive fungal infections compromises therapeutic outcomes in hematologic cancer patients and in transplant recipients. This guideline is based on a systematic literature search for clinical trials on antifungal prophylaxis [1]. Data were extracted by two of the authors. A review committee with experts for hematology and infectious diseases discussed and interpreted the data in a consensus process. A total of 86 studies were identified including 16,922 patients. Only few trials yielded significant differences in efficacy. Fluconazole 400 mg/day improved the incidence rates of invasive fungal infections and attributable mortality in allogeneic stem cell recipients with severe graft versus host disease, in patients with acute myeloid leukemia or myelodysplastic syndrome. Posaconazole 600 mg/day reduced the incidence of invasive fungal infections and the attributable mortality of patients with graft versus host disease after allogeneic stem cell transplantation and in patients with acute myeloid leukemia or with myelodysplastic syndrome. In the latter group, posaconazole prophylaxis led to a significant decrease in overall mortality. Aerolized liposomal amphotericin B reduced the incidence of invasive pulmonary aspergillosis.

Categories are based on the evaluation of study results and the recommendations developed by the Infectious Diseases Society of America, ISDA, see Table 1.

Table 1: Categories of Evidence

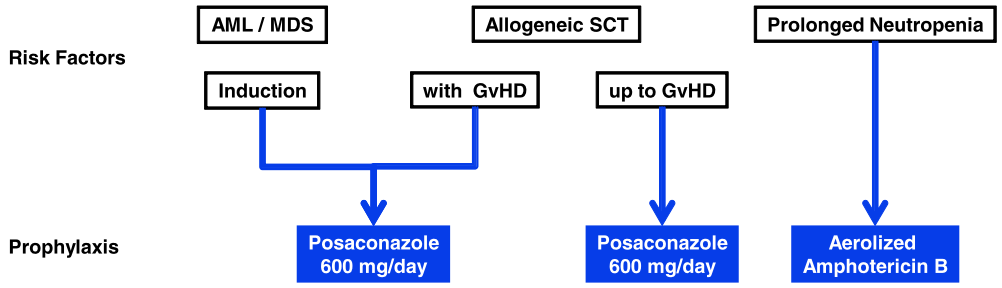
Category, grade Strength of Recommendation	Definition
A	Good evidence to support a recommendation for use
B	Moderate evidence to support a recommendation for use
C	Poor evidence to support a recommendation for use
D	Moderate evidence to support a recommendation against use
E	Good evidence to support a recommendation against use
Quality of Evidence	**Definition**
I	Evidence from ≥1 properly randomized, controlled trial
II	Evidence from ≥1 well-designed clinical trial, without randomization; from cohort or case-controlled analytic studies (preferable from >1 centre); from multiple time series; or from dramatic results of uncontrolled experiments
III	Evidence from opinions of respected authorities, based on clinical experience, descriptive studies, or reports from expert committees

2 Primary Prophylaxis

Posaconazole 600 mg/day is recommended in patients with acute myeloid leukemia (AML) / myelodysplastic syndrome (MDS) or undergoing allogeneic stem cell recipients for the prevention of invasive fungal infections and reduction of mortality [A-I] [2, 3]. Flucanozole 400 mg/day is recommended in allogeneic stem cell recipients until development of graft versus host disease [A-I] [4, 5]. Aerolized liposomal amphotericin B is recommended during prolonged neutropenia [B-II] [6].

The algorithm for primary prophylaxis is depicted of fungal infections is depicted in Figure 1.

Figure 1: Algorithm for Primary Prophylaxis of Fungal Infections



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10 Drugs and Dose

Table 2: Antifungal Prophylaxis

Substance	Dose	Application
Amphotericin, liposomal	12,5 mg twice weekly	Inhalation
Fluconazole	1 x 400 mg daily	PO
Posaconazole	3 x 200 mg daily	PO

14 Links

https://www.agiho.de/ueber-die-agiho

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17 Disclosures

according to the rules of the responsible Medical Societies.