

Invasive fungal infections in onco-haematology: a Spanish perspective

INTRODUCTION

Antifungal therapy for suspected or confirmed invasive fungal infection (IFI) is a standard care in neutropenic cancer patients (e.g. leukemia and haematopoietic stem cell transplant). New antifungal agents offer alternative treatment options but the choice of an appropriate drug represents a challenge.

There are key guidelines and recommendations developed by the Infectious Diseases Society of America (IDSA), the European Conference on Infections in Leukemia (ECIL), the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) and the Spanish Society of Chemotherapy (SEQ). These scientific societies have tried to optimize treatment of IFI for each clinical scenario searching always the highest efficacy and safety.

In Spain, data on the use of the different therapeutic strategies by haemato-oncology specialists and criteria followed when selecting an antifungal agent are lacking. Therefore, information provided by a survey regarding practices and opinions of Spanish experts will reduce the existing knowledge gap.

METHOD

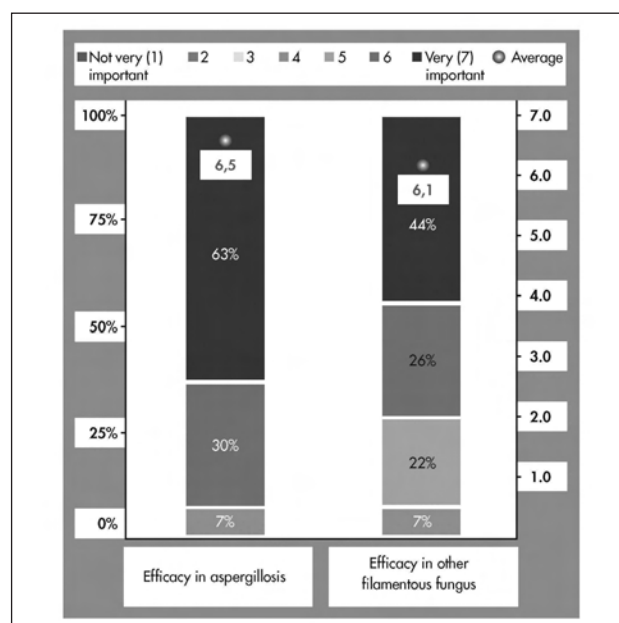
A survey was conducted during second quarter of 2011. Using a quantitative methodology, the tool used in this study was a personal interview, lasting 10 minutes maximum. Participating physicians had the possibility to express his/her opinion through at least one of the following options: through a CATI questionnaire (telephone interview) or through a CAWI questionnaire (web-based interview), which allowed greater accessibility to the population target. The questionnaire was structured into 7 closed questions that could be answered through different scales, such as a "yes" or "no" scale or a 1-7 weighing scale, where 1 was the the lowest possible score and 7 the highest possible score. It should be noted that some of these questions were supplemented by open questions, that is, some in which the participant could give his/her opinion through the written language, such as the time for expressing the rea-

sons for considering a particular drug as a reference drug among those included in armamentarium of a given therapeutic class. The study sample included 27 haematologists who offered their opinions during the data collection period (16 days).

RESULTS

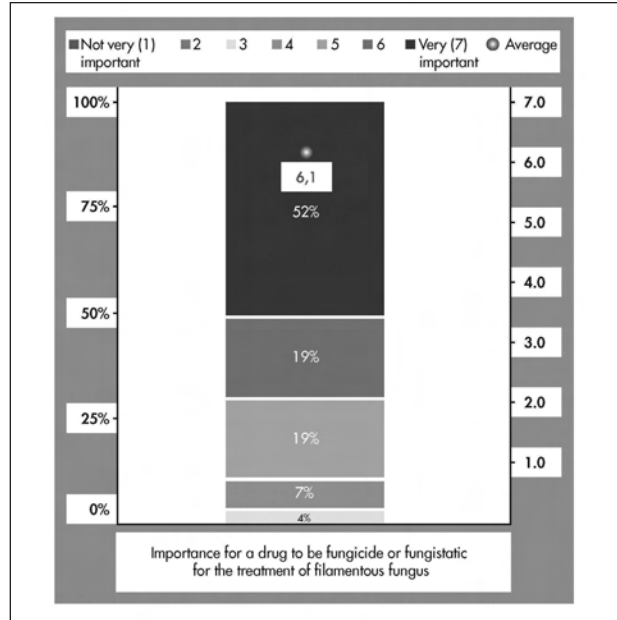
The answers to the questionnaire regarding the opinion and practices of the experts in haemato-oncology are here presented.

When you are faced with empirical treatment of a patient suspected of having IFI, how important is the following item: efficacy in aspergillosis and other filamentous fungus?. Please, assess each item on a scale from 1 to 7, where 1 is not very important and 7 very important.



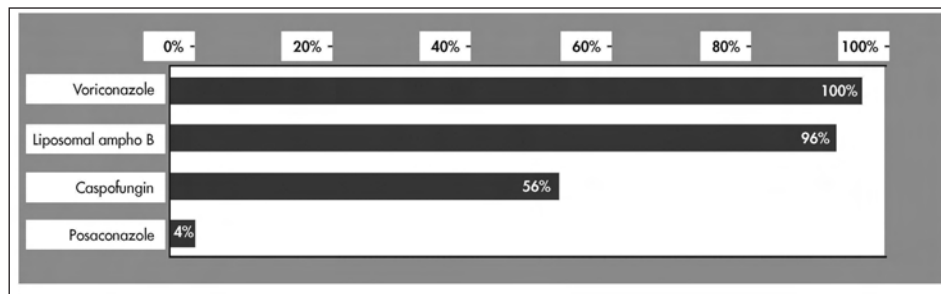
Basis: 27 hematologists interviewed

Would you assess to what extent the drug is fungistatic o fungicide for treatment of a filamentous fungus?. Please, assess each item on a scale from 1 to 7, where 1 is not very important and 7 very important.



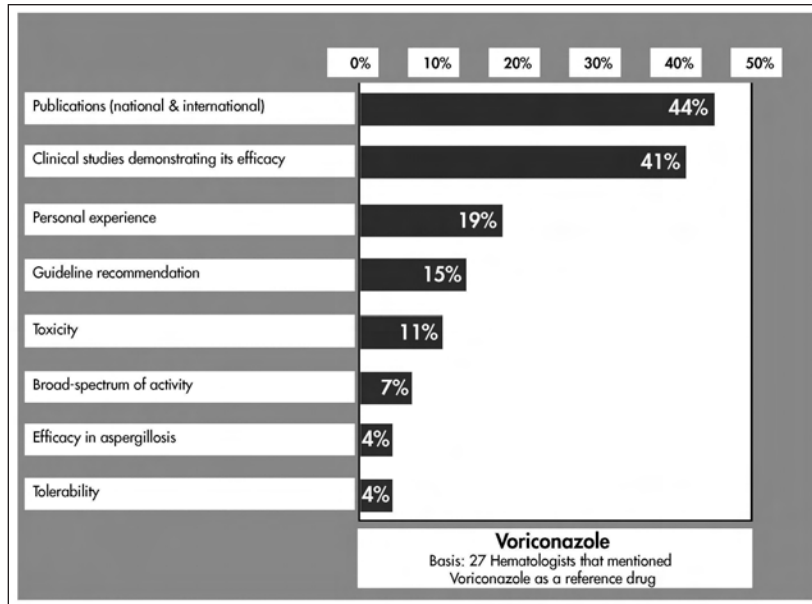
Basis: 27 hematologists interviewed

In your opinion, which of the following drugs is a reference agent for the treatment of aspergillosis: liposomal amphotericin B, voriconazole, caspofungin and posaconazole? (multiple choice)



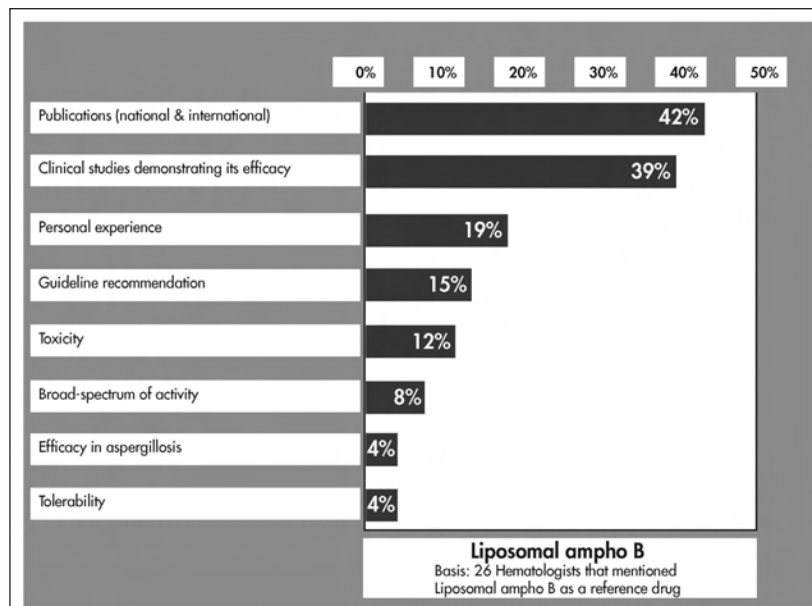
Basis: 27 hematologists interviewed

For the following drugs, what are your reasons to consider a drug as a reference agent for the treatment of aspergillosis: publications (national & international), clinical studies demonstrating its efficacy, personal experience, guideline recommendation, toxicity, broad-spectrum of activity, efficacy in aspergillosis, and tolerability? (multiple choice) (only drugs with answers > 50% were considered)



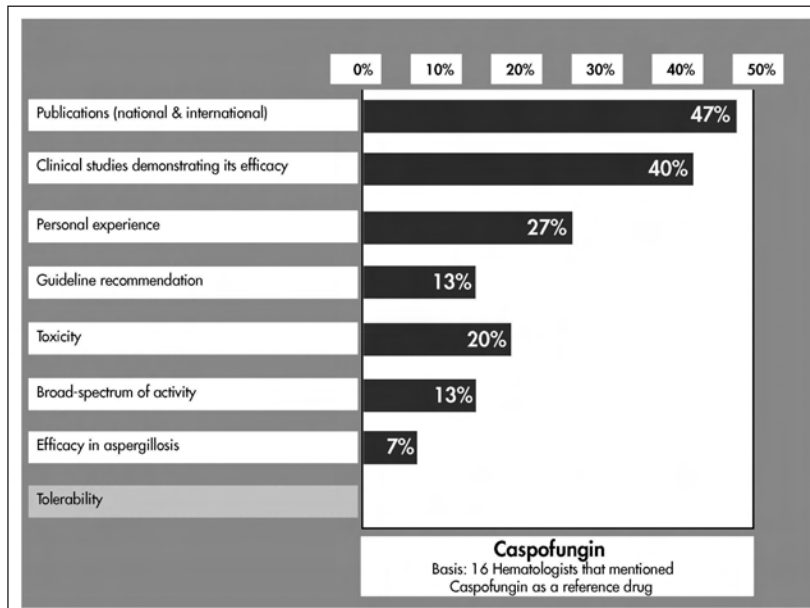
Voriconazole

Basis: 27 hematologists who mentioned voriconazole as a reference drug



Liposomal amphotericin B

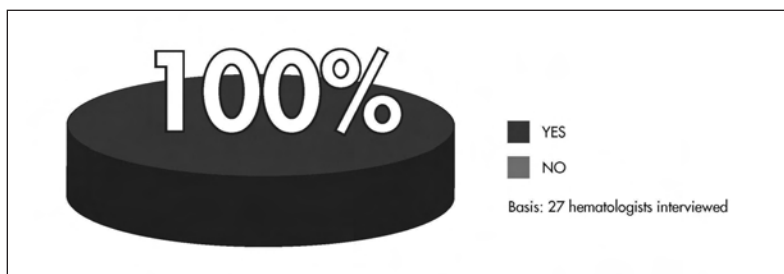
Basis: 26 hematologists who mentioned liposomal amphotericin B as a reference drug



Caspofungin

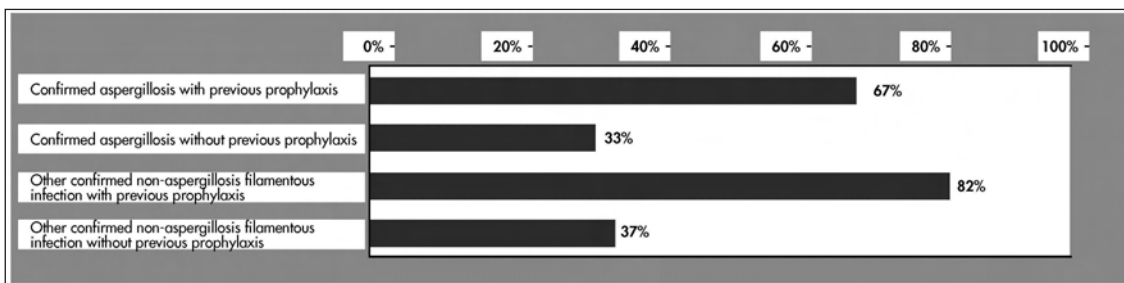
Basis: 16 hematologists who mentioned caspofungin as a reference drug

In your opinion, do you consider that combined antifungal therapy is the appropriate therapeutic strategy in some specific cases?



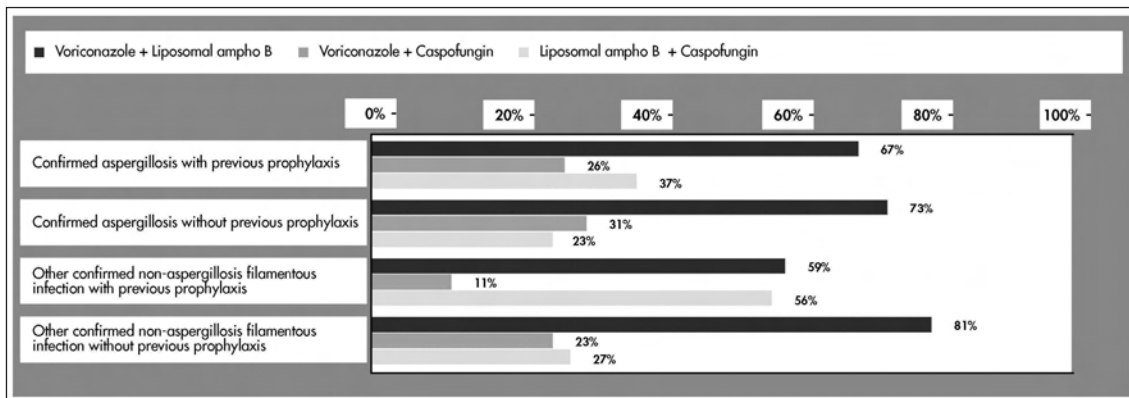
Basis: 27 hematologists interviewed

Please, indicate the cases in which you would agree to give a combined antifungal treatment: confirmed aspergillosis with previous prophylaxis, confirmed aspergillosis without previous prophylaxis, other confirmed non- aspergillosis filamentous infection with previous prophylaxis, and other confirmed non-aspergillosis filamentous infection without previous prophylaxis (multiple choice)



Basis: 27 hematologists interviewed

In previous cases, which of the following combinations of antifungal agents would you use: voriconazole and liposomal amphotericin B, voriconazole and caspofungin, or liposomal amphotericin B and caspofungin?



Basis: 27 hematologists interviewed

CONCLUSIONS

Data provided by this survey carried out in a representative sample of 27 Spanish haematologists on current and crucial aspects of the treatment of fungal infection in the haematological patient, can be summarized as follows:

1. The efficacy of antifungal drugs against filamentous fungi is very important in the choice of empirical treatment for more than half of the specialists surveyed, particularly in case of aspergillosis.
2. The type of activity of the antifungal drug (fungicidal or fungistatic) is also considered by more than half of haematologists at the time of treating infections by filamentous fungi.
3. Voriconazole and liposomal amphotericin B are considered by almost all haematologists as the reference antifungal agents for the treatment of aspergillosis mostly on the basis of publications and clinical studies that have demonstrated their efficacy.
4. All haematologists agreed that the combination of antifungal drugs is an appropriate strategy, particularly in patients with infections caused by filamentous fungi who had previously received prophylaxis. In these cases, voriconazole plus liposomal amphotericin B was the combination of choice.

CONFLICT OF INTEREST

Cegedim Strategic Data was the agency which conducted the survey, supported by Gilead Sciences.

This document has been written by Gilead Medical Department.

ACKNOWLEDGEMENTS

Andres Novo¹, Andreu Llorente², Antonia Cladera³, Daniel Rubio⁴, David Valcarcel⁵, Elena Amutio⁶, Eulogio Conde⁷, Eusebio Martín⁸, Joaquin Díaz- Mediavilla⁹, José Juan Rifón¹⁰, José Luis Díez¹¹, José Rafael Cabrera¹², Josefina Serrano¹³, Juan Besalduch¹⁴, Juan Carlos Gcía. Ruiz⁶, Juan Carlos Gcía. Zueco⁴, Juan Carlos Vallejo¹⁵, Lourdes Vázquez¹⁶, M. Ángeles Cuesta¹⁷, Miguel Luciano Díaz¹⁸, Montserrat Batlle¹⁹, Montserrat Rovira^{20,21}, Pascual Fdez. Abellán, Rafael Rojas¹³, Salvador Tabares¹³, Teresa Olave²² and Valle Gomez²³.

¹Hospital Univ. Son Espases, Palma de Mallorca, España. ²Hospital Univ. Joan XXIII, Tarragona, España. ³Fundacion Hospital Sont Llatzer, Palma de Mallorca, España. ⁴Hospital Univ. Miguel Servet, Zaragoza, España. ⁵Hospital de la Sta. Creu i Sant Pau, Barcelona, España. ⁶Hospital de Cruces, Vizcaya, España. ⁷Hospital Univ. Marques de Valdecilla, Santander, España. ⁸Hospital Juan Ramon Jimenez, Huelva, España. ⁹Hospital Clinico San Carlos, Madrid, España. ¹⁰Hospital de Navarra, Pamplona, España. ¹¹Hospital Univ. Gregorio Marañón, Madrid, España. ¹²Hospital Univ. Puerta de Hierro, Madrid, España. ¹³Hospital Reina Sofia, Cordoba, España. ¹⁴Policlínica Miramar, Palma de Mallorca, España. ¹⁵Hospital Univ. Central de Asturias, Oviedo, España. ¹⁶Hospital Univ. de Salamanca, Salamanca, España. ¹⁷Hospital M.I. Carlos Haya, Malaga, España. ¹⁸Hospital Univ. de Guadalajara, Guadalajara, España. ¹⁹Hospital German Trias i Pujol, Barcelona, España. ²⁰Hospital Clinic i Provincial, Barcelona, España. ²¹Hospital Gral. de Alicante, Alicante, España. ²²Hospital Clinico Univ. Lozano Blesa, Zaragoza, España. ²³Hospital de La Princesa, Madrid, España.