PHARMACOECONOMIC ANALYSIS OF ANIDULAFUNGIN, MICAFUNGIN, CASPOFUNGIN AND FLUCONAZOLE IN THE TREATMENT OF CANDIDEMIA AND/OR INVASIVE CANDIDIASIS IN NON-NEUTROPENIC ADULT ICU PATIENTS IN SPAIN

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OBJECTIVES

• To estimate the cost-effectiveness of three echinocandins (anidulafungin, caspofungin, and micafungin) and generic fluconazole in the treatment of non-neutropenic adult patients with candidemia and/or invasive candidiasis in intensive care units in Spain.

METHODS

• A decision tree model was performed (Figure 1).

• The success (clinical and microbiological response) and safety (hepatic and renal adverse effects) of first-line treatments were obtained from meta-analyses and systematic reviews of clinical trials (Table 1).

• In the case of failure, a second-line treatment (liposomal amphotericin B after the echinocandins, or one of the echinocandins after fluconazole) was administered.

• The duration of the treatments (14 days total) was established by a panel of clinical experts using the Delphi method and according to IDSA guidelines (Table 1).

• The cost of the medications and renal toxicity were considered (Table 1).

• In the case of failure, a second-line treatment (liposomal amphotericin B after the echinocandins, or one of the echinocandins after fluconazole) was administered.

• The total cost of the treatment of candidemia and/or invasive candidiasis with anidulafungin, caspofungin, micafungin, and fluconazole was €5,483, €5,968, €6,231, and €2,088, respectively (Table 2).

• Anidulafungin was the dominant treatment (more effective, less expensive) compared to micafungin and caspofungin (Table 2).

• The cost of achieving one more patient successfully treated with anidulafungin, caspofungin, and micafungin compared to fluconazole was €17,199, €23,962, and €27,339, respectively (Table 2).

• The result remained stable despite modification of the duration of the first-line and second-line treatments, as well as most of the dosing regimens (Table 3).

• The probabilistic analysis also remained stable in 100% of simulations (Table 4).

CONCLUSIONS

• According to the model, anidulafungin produced savings and was the dominant treatment compared with micafungin and caspofungin in non-neutropenic adult patients with candidemia and/or invasive candidiasis in ICUs in Spain.