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Abstract (poster session)

Cost-analysis of voriconazole versus liposomal amphotericin B for primary therapy of invasive aspergillosis among haematologic patients in Spain

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Objective: An economic evaluation of voriconazole (Vfend®) versus liposomal amphotericin B (AmBisome) as first-line antifungals for IA among patients with prolonged neutropenia or undergoing bone marrow or hematopoietic stem-cell transplantation (BMT/HSCT) from a Spanish hospital perspective was performed. **Methods:** A decision analytic model was constructed to estimate the potential treatment costs of alternative interventions voriconazole versus liposomal amphotericin B. Each pathway in the model was defined by probabilities of an event to occur and costs of clinical outcomes. Outcome probabilities and cost inputs were derived from published literature, clinical trials, and local database costs. In the base case, patients who failed first-line therapy were assumed to either experience a single switch between comparator drugs or add on the other drug as second-line treatment. Base-case evaluation only included drug management costs and additional hospitalization costs due to severe adverse events associated with first- and second-line therapy. Sensitivity analyses were conducted to assess robustness of results. All cost estimates were inflated to year 2012 Euros. **Results:** Based on clinical trial treatment success rates of 52.8% (voriconazole) and 50.0% (liposomal amphotericin B), and LOT=7-day intravenous (IV) + 8-day oral for voriconazole and 15-day IV for liposomal amphotericin B, voriconazole had a lower total treatment cost than liposomal amphotericin B (€ 8,032 vs. € 10,515). Assuming the same efficacy (50%) in the first-line therapy, voriconazole still had a lower total treatment cost than liposomal amphotericin B (€ 8,425 vs. € 10,515). Assuming the same LOT (10 or 15 days) in both arms, voriconazole maintained a lower treatment cost. The model was sensitive neither to drug prices nor hospitalization cost per day. Cost savings were primarily due to the lower drug costs and shorter IV LOT associated with voriconazole. **Conclusion:** This study suggests that voriconazole is likely to be cost-saving compared to liposomal amphotericin B in the treatment of invasive aspergillosis from the Spanish hospital perspective.