

Letter

Use of prophylactic fluconazole in a neonatal intensive care unit: efficacy is similar to that described in adult high-risk surgical patients

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We read with great interest the recent article by Ho and coworkers [1] concerning the use of prophylactic fluconazole in high-risk surgical patients, in which those authors reported on seven randomized controlled studies from the Cochrane Controlled Trial Register. Ho and colleagues concluded that the use of prophylactic fluconazole in immunocompetent high-risk surgical patients is associated with a reduced incidence of candidaemia, fewer patients requiring systemic amphotericin B as rescue therapy for systemic fungal infection, and no increase in the proportion of patients colonized with or infected with fluconazole-resistant fungi, but with only a trend toward a reduction in hospital mortality.

In addition to the high-risk surgical patients considered by Ho and coworkers [1], preterm neonates in the neonatal intensive care unit are at increased risk for fungal colonization and infection but – despite positive reports from a limited number of institutions including ours [2-4] – the use of prophylactic fluconazole in these subsets is not yet viewed as a standard of care [5]. Nevertheless, in our tertiary neonatal intensive care unit we began to use fluconazole in 2001 in all neonates with birth weight less than 1500 g, and our findings are fully consistent with the data reported by Ho and colleagues.

In particular, when we analyzed the decade from 1996 to 2005 and compared the period 2001–2005 with the 5-year period before the introduction of fluconazole prophylaxis (388 versus 345 patients, respectively), we found significant reductions in fungal colonization (any site: from 45.2% to 23.9%, 95% confidence interval 0.265–0.608; $P < 0.0001$), fungal systemic infection (from 16.1% to 4.6%, 95% confidence interval 0.135–0.498; $P < 0.0001$) and rates of progression from colonization to infection (from 0.36 to 0.18, 95% confidence interval 0.148–0.802; $P = 0.01$), with no increase in the number of infants colonized (10/345 versus

11/388; $P = 0.45$) or infected (5/345 versus 4/388; $P = 0.35$) by fluconazole-resistant fungi. Similarly to the findings reported by Ho and coworkers, overall hospital mortality was not significantly reduced with fluconazole (from 11.8% to 10.4%; $P = 0.29$); however, colonized infants treated with prophylactic fluconazole were significantly more likely to survive than were those who were not treated (mortality rate 4.1% versus 17.7%, 95% confidence interval 0.039–0.778; $P = 0.008$).

Our data confirm the effectiveness of the strategy of administering prophylactic fluconazole in a population of high-risk patients other than those most frequently described (i.e. high-risk surgical patients), and suggest that extension of this policy to high-risk patients in neonatal intensive care settings is warranted.

Competing interests

The author(s) declare that they have no competing interests.

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