

Fluconazole Prophylaxis
East Bay Newborn Specialists Guideline
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Background

Candida is the third most common cause of late onset sepsis in VLBW infants with mortality rates of 10-15%. *Candida* bloodstream infection (BSI) increases hospital days and cost. When results of RCT and retrospective cohort studies are combined (studying 2,956 VLBW infants), there was a statistically significant decrease in death in VLBW infants receiving fluconazole prophylaxis.

Safety and Efficacy of Fluconazole

Fluconazole impairs adherence of *Candida* to endothelial and epithelial surfaces, decreases biofilm formation in central venous catheters (CVCs), enhances killing of *Candida sp* through direct eradication and improved host defense response. Known side effects are reversible elevations in liver enzymes and bilirubin. No RCT or retrospective study shows significant or long term adverse effects from prophylaxis

Incidence of *Candida* BSI

Children's Hospital Oakland, Alta Bates, and John Muir have a *Candida* BSI rate of less than 1% in infants less than 1,000g (as of June 2010).

Treatment

Consider treatment with fluconazole prophylaxis for infants less than 1000 grams if an infant has 3 of the following risk factors:

- *Candida* colonization
- Use of broad spectrum antimicrobials (especially cephalosporins) for 10 or more days
- Central venous catheter placement
- Use of histamine blockers
- Use of steroids (no literature to support this although routinely listed as a risk factor)
- Recent abdominal surgery

Dosing

Fluconazole 3mg/kg/dose IV administered twice weekly for 6 weeks or until the CVC is removed. If infant has a positive blood culture for *Candida*, switch to amphotericin.

Monitoring

Check liver function tests weekly.

References

Manzoni, et al. A Multicenter Randomized Trial of Prophylactic Fluconazole in Preterm Infants. *New England Journal of Medicine*. June 2007; 2483-2495.

Kaufman, et al. Twice weekly Fluconazole Prophylaxis for Prevention of Invasive *Candida* Infection in High Risk Infants of Less than 1,000g birth weight. *Journal of Pediatrics*. August 2005; 135-141.