

DSEN ABSTRACT

Fluconazole and adverse pregnancy outcomes: utilization and adverse outcomes (Q16-09)

A study conducted by the Canadian Network for Observational Drug Effect Studies (CNODES)

Summary

- In this large study of 4,103,700 pregnant women, fluconazole use during pregnancy was associated with an increased risk of fetal death, but not congenital malformation, relative to use of vaginal azole antifungals.

Key messages

- Results from this large, international cohort study support current recommendations discouraging use of oral fluconazole among women who are pregnant or trying to become pregnant.

Project Lead & Team

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- Team members [available here](#)

Link to publication

- In preparation

What is the issue?

- Vaginal candidiasis is a common fungal infection occurring in 10-30% of pregnant women. Although intravaginal formulations of azole antifungals are first-line treatment, oral fluconazole is frequently prescribed, despite safety concerns.

What was the aim of the study?

- CNODES evaluated whether use of oral fluconazole during pregnancy is associated with fetal death (a composite of spontaneous abortion and stillbirth) and major congenital malformation, relative to use of vaginal azole antifungals.

How was the study conducted?

- We undertook a retrospective cohort study using administrative health databases with 4,103,700 pregnancy episodes from 5 Canadian provinces (British Columbia, Alberta, Saskatchewan, Manitoba and Ontario), as well as the US (IBM MarketScan®) and the UK (Clinical Practice Research Datalink).
- Exposure to oral fluconazole was compared with exposure to other commonly prescribed vaginal antifungals. The outcomes were fetal death (composite of spontaneous abortion or stillbirth) and major congenital malformations.
- Hazard ratios (HR) were estimated for fetal death and adjusted odd ratios (OR) were estimated for major congenital malformations. Results were pooled across sites using meta-analysis.

What did the study find?

- During pregnancy, 1.9% of women were exposed to oral fluconazole versus 3.3% to vaginal azole antifungals, with wide variation across jurisdictions.
- Fetal death occurred in 14.2% of the 60,874 pregnancies exposed to oral fluconazole versus in 4.8% of 107,212 pregnancies exposed to vaginal azole antifungals.
- Oral fluconazole was associated with an increased risk of fetal death (HR 1.30; 95% CI 1.24-1.35), compared with vaginal azole antifungals.
- The risk of fetal death was particularly elevated with exposure during the period of 4-10 weeks of gestation (HR 1.49; 95% CI 1.41-1.58).
- Oral fluconazole was not associated with an increased risk of major congenital malformation (HR 0.91; 95% CI 0.75-1.09).

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For more information, please contact info@cnodes.ca.