FPIN's Clinical Inquiries

Treatment of HSV Infection in Late Pregnancy

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Clinical Inquiries provides answers to questions submitted by practicing family physicians to the Family Physicians Inquiries Network (FPIN). Members of the network select questions based on their relevance to family medicine. Answers are drawn from an approved set of evidence-based resources and undergo peer review. The strength of recommendations and the level of evidence for individual studies are rated using criteria developed by the Evidence-Based Medicine Working Group (http://www.cebm.net/?o=1025).

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Clinical Question

What is the best way to manage genital herpes simplex virus (HSV) infection in late pregnancy?

Evidence-Based Answer

Pregnant women with a primary or recurrent episode of genital HSV infection who are later than 36 weeks of gestation should be treated with acyclovir (Zovirax) or valacyclovir (Valtrex) for viral suppression. (Strength of Recommendation [SOR]: A, based on one systematic review.) Suppressive therapy at the time of delivery can reduce the rate of recurrence, the risk of asymptomatic viral shedding, and the number of cesarean deliveries because of active HSV infection. Women with active lesions at the time of labor should have a cesarean delivery to decrease vertical transmission of HSV. (SOR: B, based on one prospective cohort study.) Acyclovir prophylaxis is more cost-effective than expectant management with cesarean delivery in women with a history of genital HSV infection, with or without recurrence during pregnancy.

Evidence Summary

Among women with recurrent genital HSV infection, approximately 75 percent can expect at least one recurrence during pregnancy, and approximately 14 percent will have prodromal symptoms or clinical recurrence at delivery.[1,2] A Cochrane review of seven randomized controlled trials with 1,249 participants found that women with a primary or recurrent episode of genital HSV infection who received antiviral prophylaxis with acyclovir (400 mg three times per day) or valacyclovir (500 mg twice per day) starting at 36 weeks of gestation were significantly less likely to have a recurrence at delivery (3.8 percent with treatment versus 15 percent with placebo or no treatment; relative risk [RR] = 0.28; 95% confidence interval [CI], 0.18 to 0.43; number needed to treat [NNT] = 9).[3] Suppression therapy with either drug significantly decreased the number of cesarean deliveries required because of HSV infection (3.8 percent with treatment versus 14 percent with placebo or no treatment; RR = 0.30; 95% CI, 0.20 to 0.45; NNT = 10). The rate of asymptomatic HSV shedding at time of delivery also decreased (0.4 percent with treatment versus 6.3 percent with placebo or no treatment; RR = 0.14; 95% CI, 0.05 to 0.39; NNT = 17). The effect of antiviral prophylaxis on neonatal HSV infection could not be estimated because of a low incidence rate. Valacyclovir is considerably more expensive than acyclovir.

A large prospective cohort study of 58,362 pregnant women was conducted to determine the effect of cesarean delivery on neonatal transmission of HSV.[4] Of the 202 women with active HSV infection at the time of labor, neonatal HSV infection occurred in 1.2 percent of infants from cesarean delivery compared with 7.7 percent of infants delivered vaginally (RR = 0.14; 95% CI, 0.02 to 1.08; NNT = 15).

In patients with a history of genital HSV infection, antiretroviral prophylaxis starting at 36 weeks of gestation has been shown to be more cost-effective than expectant management with cesarean delivery for active lesions at the time of delivery.[5,6] In women with recurrent HSV infection in pregnancy, the estimated savings were $0.8 million per case of neonatal HSV infection averted and $1.8 million per neonatal death or case of disability averted.[6] For women with a history of genital HSV infection but no recurrence in pregnancy, suppressive therapy could save approximately $20 per person and increase total quality-adjusted life years ▶

by 0.01.[7] Considering the 160,000 women who could benefit from the therapy each year, this becomes a savings of $3.2 million in direct medical costs and an increase of 1,600 quality-adjusted life years. There are no studies evaluating the cost-effectiveness of antiviral prophylaxis with valacyclovir.

Recommendations from Others

The American College of Obstetricians and Gynecologists and the Society of Obstetricians and Gynaecologists of Canada (SOGC) recommend that women with active recurrent genital HSV infection be offered suppressive viral therapy with acyclovir or valacyclovir at or beyond 36 weeks of gestation.[7,8] Both organizations advocate for cesarean delivery in women with active genital lesions or prodromal symptoms, such as vulvar pain or burning at delivery. SOGC also recommends that women with primary genital HSV infection in the third trimester of pregnancy be offered a cesarean delivery regardless of the presence or absence of active lesions at delivery because of the high risk (30 to 60 percent) of vertical transmission.

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