Mother, infant, and syphilis: increasing cause for concern in British Columbia

In 1997 national goals were set for maintaining infectious syphilis rates below 0.5 per 100 000 population and preventing all endemic congenital syphilis cases. Such optimism proved unfounded; that same year infectious syphilis rates began to rise in BC, to 7.7 cases per 100 000 in 2006. Most recently, this epidemic has led to an increased number of congenital syphilis cases and syphilis infections in pregnant women, similar to recent reports from Alberta.

Epidemiology

From 2003 to 2006, nine to eleven pregnant women were diagnosed with infectious syphilis annually (70% of these infections were identified through prenatal syphilis screening). Since 2005 there have been seven cases of early congenital syphilis, an increase compared with the fourreported cases during the previous decade. In reviewing these seven recent cases, five mothers had histories of substance use or street involvement with delayed or no prenatal care. Of the two remaining mothers with appropriate prenatal care, one woman was not screened prenatally for syphilis. Four of the seven infants were stillborn or died after birth.

Clinical presentation

The clinical diagnosis of infectious syphilis in pregnancy can be difficult. The chancre associated with primary syphilis may not be readily apparent, or may be misdiagnosed as another ulcerative disorder (e.g., herpes). Women with secondary syphilis may have nonspecific symptoms (including rash, fever, malaise, and lymphadenopathy), and women at any stage of infection can be asymptomatic.

Infants are typically infected in utero, although transmission can occur through contact with active genital lesions at delivery. The risk of transmission from mother to child depends largely on the duration of the disease in the mother (70% to 100% transmission with primary or secondary, 40% with early latent, and 10% with late latent syphilis), with fetal death occurring in about 40% of pregnancies. Treatment of mothers using the stage-appropriate doses of benzathine penicillin G will reduce the risk of transmission.

Two-thirds of infants with early congenital syphilis (onset less than 2 years of age) may be asymptomatic. Signs include snuffles or nasal discharge, hepatosplenomegaly, distended abdomen, and desquamative skin rashes. Other signs suggestive of congenital syphilis include infants found to have hemolytic anemia or radiographic abnormalities of the long bones.

Implications for practice

Currently 90% of specimens collected for prenatal blood screening in BC include testing for syphilis. All pregnant women should be offered screening for syphilis in the first trimester as universal prenatal syphilis screening remains the cornerstone for detection and treatment, and prevention of vertical transmission. Improving access to prenatal care including syphilis testing for marginalized women at higher risk of syphilis infection is particularly important.

Screening should be repeated at 28 to 32 weeks' gestation in women at high risk of acquiring syphilis (i.e., women who have had sexual contact of a syphilis case, sex-trade workers, street-involved or homeless women, users of injection drugs, women with multiple sexual partners, women with a previous history of syphilis, HIV, or other STI, or women with a sexual partner from a syphilis-endemic country). However, infections may occur in women without risk factors following an initial negative syphilis prenatal screen. Testing should be performed at any stage of pregnancy if clinically indicated (particularly if genital ulcers are present), and for any woman delivering a stillborn infant at ≥20 weeks gestation. Screening for HIV and other STI is recommended for any women with a positive syphilis result.

Two-thirds of infants with early congenital syphilis (onset less than 2 years of age) may be asymptomatic.

Any infants presenting with signs or symptoms compatible with early congenital syphilis should be tested. Asymptomatic infants should be screened at birth if their mother was not tested for syphilis prenatally, had a reactive prenatal syphilis test, or was at high risk for infection in pregnancy after a negative prenatal syphilis test.

Management

The management of infectious syphilis in pregnancy and congenital syphilis is complex and requires specialist

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References

1. Ipsos-Reid. Hospice Palliative Care Study: Final Report. The GlaxoSmithKline Foundation and the Canadian Hospice Palliative Care Association, 2004:18,20.
2. Tierney WM, Dexter PR, Grmelspacher, et al. J Gen Intern Med 2001;16:32-40.
3. Silveira MJ, DiPiero A, Gerrity MS, et al. JAMA 2000;284:2483-2488.
4. Fried T, Bradley E, O'Leary J. J Am Geriatrics Soc 2003 Oct;51(10):1398-1403.

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care. STI Clinic staff at the BC Centre for Disease Control follow up on all positive syphilis test results and are available by telephone at 604 660-6161 to answer questions regarding the interpretation of syphilis serology results and further management of infectious syphilis cases in pregnancy.

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Further reading

Singh A, Sutherland K, Lee B, Robinson JL, et al. Resurgence of early congenital syphilis in Alberta. CMAJ 2007;177: 33-36.

Public Health Agency of Canada. Canadian Guidelines on Sexually Transmitted Infections 2006 Edition. Syphilis [updated Oct 2007]. www.phac-aspc.gc.ca/std-mts/sti_2006/sti_intro2006_e.html (accessed 20 December 2007).

BC Centre for Disease Control British Columbia Treatment Guidelines: Sexually Transmitted Infections in Adolescents and Adults 2007. www.bccdc.org/division.php?item=3#Reports (accessed 20 December 2007).

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