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Complications of Varicella Infection in the Third Trimester

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Varicella, a herpes virus, is highly contagious and associated with significant maternal and neonatal morbidity during pregnancy. Clinical features of maternal infection include a prodrome of fever, headache, and malaise, followed by pruritis and a maculopapular rash which becomes vesicular prior to crusting over.

Pregnant women should have varicella immunity documented early in pregnancy either by history of previous infection or vaccination. If there is no history of either, immunity can be checked with varicella IgG serology. If a pregnant woman is exposed to varicella and immunity has not been previously documented, then serology should be checked. If the serology is negative, then she should receive varicella immune globulin (VZIG or VariZIG) within 10 days of exposure, ideally within 96 hours, to reduce the risk of maternal infection and morbidity. Oral antiviral agents (acyclovir, valacyclovir, famciclovir) started within 72 hours of the onset of symptoms are also recommended to reduce the severity and risk of complications such as pneumonia and respiratory distress. Pneumonia occurs in 10-20% of infected pregnant women, and requires hospitalization and treatment with intravenous antiviral agents. The varicella vaccine is contraindicated in pregnancy because it is a live attenuated vaccine. Pregnant women who are not immune to varicella should receive the vaccine postpartum.

When a pregnant woman is infected at term there is a high likelihood of neonatal infection if the infant is born within 7 days before or 7 days after the onset of a maternal rash. About two-thirds of infants will be infected and half will have the characteristic rash and are at risk for systemic illness including pneumonia, liver failure, encephalopathy, and coagulopathy. To reduce the transmission of varicella it is preferable to delay the delivery by 5-7 days to allow for passive immunity from mother to infant. However, this is not always possible. Following delivery, the pediatrician or neonatologist should be notified. A neonatal ophthalmic exam and serologic testing is recommended. Varicella immune globulin is recommended to reduce the severity of infection for neonates delivered to mothers who develop varicella from 5 days before to 2 days following delivery. Intravenous acyclovir is recommended if signs of neonatal infection develop.

(continued on next page)

Further Reading:

American College of Obstetricians & Gynecologists, **Practice bulletin no. 151: Cytomegalovirus, parvovirus B19, varicella zoster, and toxoplasmosis in pregnancy.,** Obstet Gynecol. 2015 Jun;125(6):1510-25. doi: 10.1097/01.AOG.0000466430.19823.53.

Lamont RF, Sobel JD, Carrington D et al. **Varicella-zoster virus (chickenpox) infection in pregnancy.** BJOG. 2011 Sep;118(10):1155-62. doi: 10.1111/j.1471-0528.2011.02983.x. Epub 2011 May 18.

Center for Disease Control & Prevention, **Updated recommendations for use of VariZIG--United States, 2013.,** MMWR Morb Mortal Wkly Rep. 2013 Jul 19;62(28):574-6.

Initial Approval September 2012; Revised July 2015; Reaffirmed July 2018, Reaffirmed January 2020

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