Chickenpox in Pregnancy

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This is the fourth edition of this guideline, originally published in 1997 and reviewed in 2001 and 2007 under the same title.

Executive summary of recommendations

Can the non-immune woman be immunised prior to pregnancy or postnatally?

Varicella vaccination prepregnancy or postpartum is an option that should be considered for

period is between 1 and 3 weeks and the disease is infectious 48 hours before the rash appears and continues to be infectious until the vesicles crust over. The vesicles usually crust over within 5 days.

Chickenpox (or primary VZV infection) is a common childhood disease that usually causes a mild infection. Over 90% of individuals over 15 years of age in England and Wales ar

The varicella immune status of women planning a pregnancy or receiving treatment for infertility can be determined by obtaining a past history of chickenpox and by testing the serum for varicella antibodies in those who have no history or an uncertain history of previous infection. In 2009, the UK National Screening Committee reviewed the evidence for antenatal screening for susceptibility to varicella-zoster infection. The committee concluded that there was insufficient evidence to support antenatal screening because of a lack of reliable information on the true incidence of VZV infection in pregnancy and on the outcomes following treatment.[13]

An economic model of postpartum vaccination of women who are seronegative for chickenpox indicates that it is cost-effective.[15] However, this is currently not listed as an indication for varicella immunisation in the National Health Service and women in this category may have to discuss the provision of free vaccination with their general practitioners.[1]

If a woman of reproductive age is vaccinated, she should be advised to avoid pregnancy for 4 weeks after completing the two-dose vaccine schedule and to avoid contact with susceptible pregnant women should a post-vaccination rash occur. Transmission of vaccine virus is rare, despite it being a live attenuated virus. Inadvertent exposures to the vaccine in pregnancy have been reported to a register. There have been no cases of FVS and no increase in the risk of fetal abnormality above the background risk.[14]

Small studies have not detected the varicella vaccine in the breast milk of women who have been vaccinated postpartum.[16,17]

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Aciclovir is a synthetic nucleoside analogue that inhibits replication of the varicella-zoster virus. A randomised controlled trial has shown that aciclovir administered orally (800 mg five times a day for 7 days) reduces the duration of fever and symptomatology of varicella infection in immunocompetent adults if commenced within 24 hours of developing the rash when compared to placebo. This randomised controlled trial did not have sufficient power to comment on the impact of early oral aciclovir on the serious complications of chickenpox.[41]

Data are accumulating to suggest that there is no increase in the risk of major fetal malformation with aciclovir exposure in pregnancy.[42–44] A Danish registry-based cohort study of 837 795 live births between 1996 and 2008[43]

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Spontaneous miscarriage does not appear to be increased if chickenpox occurs in the first trimester.[25]

FVS is characterised by one or more of the following: skin scarring in a dermatomal distribution; eye defects (microphthalmia, chorioretinitis or cataracts); hypoplasia of the limbs; and neurological abnormalities (microcephaly, cortical atrophy, mental retardation or dysfunction of bowel and bladder sphincters).[25,55] It does not occur at the time of initial fetal infection but results from a subsequent herpes zoster reactivation in utero and only occurs in a minority of infected fetuses.

FVS has been reported to complicate maternal chickenpox occurring as early as 3 weeks[55] and as late as 28 weeks[56] of gestation. Pooled data from nine cohort studies detected 13 cases of FVS following 1423 cases of maternal chickenpox occurring before 20 weeks of gestation: an incidence of 0.91%.[28] The risk appears to be lower in the first trimester (0.55%).[28] These cohort studies identified one case of FVS occurring among approximately 180 women who developed chickenpox between 20 and 28 weeks of gestation.[28] In addition, this review identified seven case reports of FVS following maternal infection from 20–28 weeks and one where maternal infection occurred at 28 weeks.[28,56] These case reports provide no denominators, so an incidence rate for FVS following late second trimester infection cannot be quoted, but they make the point that FVS is not confined to cases of maternal infection before 20 weeks. The observational evidence presented in section 4.3 suggests that post-exposure prophylaxis in susceptible pregnant women reduces the risk of developing FVS.

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Prenatal diagnosis of FVS is possible by ultrasound when findings such as limb deformity, microcephaly, hydrocephalus, soft tissue calcification and fetal growth restriction can be detected. A time lag of at least 5 weeks after the primary 4.9u04324(o)5.003928(n)7.99502TJ(23.019(b)3.904324(o)5.003 .9834( )2.00684( )-4.00879(•)-3( )0.983887( )9( )-4( )-1.015

The proportion of women who develop chickenpox in pregnancy who are referred to a fetal medicine specialist at 16–20 weeks of gestation or 5 weeks after infection (100%).
The proportion of pregnant women with severe chickenpox who are given intravenous aciclovir

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The final version is the responsibility of the Guidelines Committee of the RCOG.

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