

CDC guidelines for pregnant women during the Zika virus outbreak

Zika virus is attracting worldwide attention and everyone fears its potential dramatic effects on the fetal brain. The US Centers for Disease Control and Prevention (CDC) have recently published interim guidelines on management of pregnant women exposed to Zika virus.¹ We do, however, have some comments on these recommendations.

The guideline proposes to offer amniocentesis, as early as 15 weeks' gestation, to pregnant women with a history of recent travelling to or living in a country with ongoing Zika virus circulation and presenting positive or inconclusive Zika virus testing or ultrasound findings compatible with a Zika virus infection. In endemic areas, Zika virus co-circulates with other flaviviruses and serological cross-reactions responsible for false-positive IgM detections are frequent. Since confirmation neutralising antibody testing is restricted to highly specialised laboratories, a high number of positive or inconclusive Zika virus IgM results are expected, leading to unnecessary amniocenteses and related risk of miscarriages.² The sensitivity of molecular detection of Zika virus in the amniotic fluid is not known. It is highly likely that, by analogy with cytomegalovirus or toxoplasmosis infections, the virus is only shed in the amniotic fluid once the fetal kidneys produce sufficient urine (ie, after 18–21 weeks' gestation) and once sufficient time has elapsed for the virus to breach the placental barrier (at the earliest 6–8 weeks after infection).^{3,4}

To prevent false-negative results and false reassurance of the parents, we would therefore suggest offering amniocentesis only in the presence of fetal signs or 6–8 weeks after suspected maternal exposure, and not earlier than 21 weeks' gestation with further close ultrasound follow-up of

pregnancy. Furthermore, the incidence of microcephaly and brain lesions in fetuses developing in the presence of Zika virus in the amniotic fluid is not known.

In view of this uncertainty, it is highly questionable whether amniocentesis, which carries a 0.1–1% risk of miscarriage,² is at all useful in the asymptomatic fetus. A normal result might not bring reassurance, and the presence of Zika virus in the amniotic fluid might not necessarily be associated with fetal brain damage. Miscarriages related to amniocentesis and pregnancies' termination of asymptomatic fetuses might be much greater than the number of truly affected children. If counselled appropriately, many couples might decline the procedure, or at least wait until 21 weeks' gestation. Additionally, since asymptomatic blood donors can still be viraemic for Zika virus,⁵ we also recommend transfusing pregnant women only with products tested negative for Zika virus when those are collected locally.

We declare no competing interests.

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- 1 Oduyebo T, Petersen EE, Rasmussen SA, et al. Update: interim guidelines for health care providers caring for pregnant women and women of reproductive age with possible Zika Virus exposure—United States, 2016. *MMWR Morb Mortal Wkly Rep* 2016; **65**: 1–6.
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- 3 American College of Obstetricians and Gynecologists. Practice bulletin no. 151: cytomegalovirus, parvovirus B19, varicella zoster, and toxoplasmosis in pregnancy. *Obstet Gynecol* 2015; **125**: 1510–25.

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- 5 Musso D, Nhan T, Robin E, et al. Potential for Zika virus transmission through blood transfusion demonstrated during an outbreak in French Polynesia, November 2013 to February 2014. *Euro Surveill* 2014; **19**: 20761.



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