

malaria, and patients with symptoms should be discussed with a physician experienced in their assessment. EDTA plasma and urine samples from symptomatic patients should be sent to the Rare and Imported Pathogens Laboratory at Porton Down (Box 1). Testing involves reverse transcription polymerase chain reaction (RT-PCR) of blood and urine. Antibody testing is not yet available in the UK and is currently less reliable due to potential cross-reaction with similar viruses, such as dengue and yellow fever. This may change soon and for now PHE recommend that all patients suspected of ZIKV infection, and any pregnant women exposed to ZIKV, should have a serum sample collected and saved. While these interim guidelines are welcome, it is important to be aware that there are limited data available to make conclusive recommendations. Pre-test counselling is important, particularly as the full characteristics of the tests are unknown and false-negative results are possible.

All pregnant women who have potentially been exposed to ZIKV should be referred to their local maternity unit for 4-weekly fetal ultrasound scan (USS) examinations. This includes asymptomatic patients, those who have had symptoms outside the testing window and patients who have tested negative for ZIKV by RT-PCR. Microcephaly is a head circumference below the 2.5th centile for gestational age and standard fetal USS is a sensitive screening test for this and other intracranial abnormalities such as ventriculomegaly and calcification.

Pregnant women with a positive ZIKV RT-PCR or with concerning findings on USS should be referred to a fetal medicine service for evaluation and follow up. This may involve a detailed USS and possibly amniocentesis from 15 weeks to test for ZIKV and other causes of neonatal infection in the amniotic fluid. Fetal brain MRI may detect abnormalities not seen on USS. It is important to remember that microcephaly and other intracranial anomalies may be caused by a number of disorders unrelated to ZIKV. PHE has clear guidelines for evaluating pregnant women with a rash, in particular, advice on when to test for rubella, varicella, or parvovirus B19.¹¹

Pregnant women should consider avoiding travel to areas with ongoing ZIKV outbreaks and seek advice from a travel health specialist. The first trimester probably carries the greatest risk of microcephaly. If travel is unavoidable they should be advised to take great care to protect against daytime mosquito bites by covering up and using insect repellents.

There is emerging evidence of ZIKV

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transmission through sexual intercourse.¹² It is not known how long ZIKV persists in semen and UK and US guidance differs, however this is unlikely to be a common route of transmission. For simplicity our advice is to follow the US Centers for Disease Control and Prevention guidance to abstain from sex or use condoms for the duration of the pregnancy if a male partner has been in a Zika virus area.⁹

ZIKV poses significant challenges in the counselling process in pregnancy as limited evidence exists to about the proportion of infected patients who are asymptomatic and have brief, low level viraemia, the risk to the fetus relative to the time of infection, the reliability and significance of laboratory tests, and the likelihood of the child developing neurological sequelae. These questions are the subject of ongoing research, but in the meantime, 1.4 million UK travellers visit countries with ongoing ZIKV transmission each year and of these we estimate that around 280 000 are women of child-bearing age. If only a small number of these are pregnant that represents several thousand women who may consider themselves at risk. Fortunately the limited data suggest that the risks to the baby are very low. However pregnancy is often an anxious time and GPs can help expectant mothers by being aware of the latest guidelines and where to seek help.

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