Ultrasound-based study strongly associates Zika virus with serious fetal harms

Mar 09, 2016 | Dave Pearson

Once inside a pregnant woman’s bloodstream, the Zika virus appears capable of afflicting her developing baby not just with microcephaly, as feared and widely speculated, but also with other congenital abnormalities and harsh effects, including injury to the central nervous system and death, according to a study published online March 4 in the New England Journal of Medicine.

A research team led by Patrícia Brasil, MD, of the Oswaldo Cruz Foundation in Rio de Janeiro enrolled and prospectively followed 88 pregnant women presenting with a Zika-suspected rash that had developed within the prior five days.

Of these, 72 women (82 percent) tested positive for the virus in their blood, urine or both.

Performing Doppler ultrasound on 42 Zika-positive women and on all Zika-negative women, the team detected fetal abnormalities in 12 of the 42 (29 percent) and in none of the 16 Zika-negative women.

Adverse findings in the positive group included:

• Fetal deaths at 36 and 38 weeks of gestation (two fetuses);
• In utero growth restriction with or without microcephaly (five fetuses);
• Ventricular calcifications or other central nervous system lesions (seven fetuses); and
• Abnormal amniotic fluid volume or cerebral or umbilical artery flow (seven fetuses).

As of the date of the study’s publication, eight of the 42 sonogrammed Zika-positive women had delivered their babies.

In each case, the previous findings at ultrasonography were confirmed upon birth.

The women themselves had suffered only the rash and other relatively minor symptoms.

In their discussion, the authors state that their findings support the link suspected to exist between maternal Zika infection and serious fetal/placental abnormalities.

Women with suspected or confirmed Zika virus infection “should be monitored closely, with serial ultrasonography to evaluate for signs of placental insufficiency, given the risks of fetal death and intrauterine growth restriction,” they write.

“The establishment of a scientifically credible link between [Zika virus] infection and abnormal congenital findings is of utmost importance,” they add, “for the effective and successful management of this epidemic in Brazil and worldwide.”