

Hepatitis C Increases Miscarriages, Pregnancy Risks

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Gail Connor Roche

Women with the hepatitis C virus (HCV) have fewer live births and face a higher risk of miscarriage, infertility, gestational diabetes and pre-eclampsia during pregnancy, researchers in Italy have found.

HCV-positive women of childbearing age undergo premature ovarian deterioration, researchers wrote. This decline in the function of the ovaries appears to cause the other pregnancy-related issues, which can also include low birth weight for the baby.

However, in an optimistic discovery, the study suggests that successfully curing women with HCV lowered their miscarriage rate.

“Young HCV positive women usually have absent or very low fibrosis and therefore are not prioritized for treatment,” corresponding author Erica Villa, MD, a professor of gastroenterology at the University of Modena & Reggio Emilia in Modena, said. “Ovarian failure therefore progresses, determining not only a high miscarriage rate but also a number of associated issues.”

Villa and her colleagues set out to investigate the impact of reduced ovarian functioning on the reproduction, risk of infertility and pregnancy outcomes in HCV-positive women of childbearing age.

They compared three groups of premenopausal women. The first included 100 HCV-positive patients with chronic liver disease (CLD). The second featured 50 hepatitis B-positive (HBV) women who also had CLD. The third was made up of 100 healthy women, who acted as a control. All individuals were matched for age and reproductive status.

The HCV-positive women had significantly lower levels of anti-Müllerian hormone (AMH), an indicator of ovarian reserve. The reduced hormone was associated with a high rate of miscarriage: 8 HCV-positive women reported multiple miscarriages, the study found.

“Among HBV positive women, miscarriages were rare and not significantly related with median AMH level,” the authors wrote. “Only one HBV positive woman had had multiple miscarriages.”

The HCV-positive women also had a lower fertility rate of 0.7 compared to 1.37 for the general public.

“These results point to a specific relationship between HCV infection, ovarian function, and reproductive efficiency,” researchers wrote. “The premature ovarian senescence observed in HCV-positive women, as indicated by the early and significant AMH

decline, has a profound effect on reproductive function.”

Asked why the miscarriage outcome was different for the two groups of women infected with viral hepatitis, Villa noted that HCV-positive women have impaired fertility while HBV-positive women do not.

“A possible explanation is a more profound involvement of the reproductive system in HCV- positive than in HBV- positive women,” she said.

The authors suggested further research to test the effect of direct-acting antiviral drugs (DAA) on pregnancy outcomes for HCV-positive women in their childbearing years.

“Preliminary data suggest that antiviral therapy can positively influence the risk of miscarriage,” Villa said. “We are presently conducting a prospective trial with DAAs to verify whether antiviral therapy can prevent ovarian senescence as a whole.”

Link to study:

The study, "[Premature ovarian senescence and high miscarriage rate impair fertility in women with hepatitis C virus infection](#)," was published online in *Journal of Hepatology* last month.