

# POSSIBLE TRANSMISSION OF NOVEL CORONAVIRUS FROM MOTHER TO CHILD

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

Spiky ball: This illustration provided by the Centers for Disease Control and Prevention (CDC) shows the 2019 novel coronavirus. | Photo Credit: [AP](#)

A possible case of transmission of novel coronavirus (SARS-CoV-2) from the mother to the child has been reported on March 26 in the *Journal of the American Medical Association* (JAMA). The researchers from the Renmin Hospital of Wuhan University and other hospitals found elevated levels of antibodies (IgM) against the coronavirus in a newborn.

The mother was laboratory confirmed to be positive for coronavirus on January 31. A chest CT showed typical signs of infection in both lungs. On February 2, the mother was admitted to the Renmin Hospital in Wuhan. Molecular tests carried out four times confirmed that she was positive for the virus.

On February 22, the infant was delivered by caesarean in a negative-pressure isolation room. The mother wore a N95 mask to reduce the chances of transmitting the virus to the newborn. The mother did not come in physical contact with the newborn after delivery. The mother's vaginal secretions were negative for the virus.

The newborn did not exhibit any symptoms of infection and molecular tests (RT-PCR) carried out five times — from two hours after birth to 16 days — were negative.

However, the newborn showed elevated levels of antibodies against novel coronavirus even at two hours after birth and remained elevated till March 7, when the mother and child were discharged. However, molecular tests of the amniotic fluid and placenta were not done.

The authors say that the antibodies (IgM) cannot be transferred to the foetus through the placenta. So in all possibility the foetus was exposed to the virus for at least 23 days from the day the mother was diagnosed positive for the virus.

Although the baby was delivered by caesarean, infection with the virus at the time of delivery cannot be completely ruled out, the authors say. But even if the baby was infected to the virus during the time of delivery, it takes three–seven days for antibodies to the virus to start appearing. However, in this case, antibodies were seen just two hours after delivery.

“The elevated IgM antibody level suggests that the neonate was infected *in utero*,” the authors write. “IgG antibodies can be transmitted to the foetus through the placenta and appear later than IgM. Therefore, the elevated IgG level may reflect maternal or infant infection.” However, only when molecular tests of the amniotic fluid and placenta (which were not done in this case) show positive can one be certain of vertical transmission.

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