Parvovirus B19 Infection

Patient Information Series – What you should know, what you should ask.

What is a Parvovirus B19 infection?

Parvovirus B19 infection is a common childhood infection that causes "Fifth disease". (Slapped Cheeks disease) When parvovirus B19 affects a pregnant woman, the infection is usually mild and has a good prognosis for the mother. However, it can also be transmitted vertically and affect the embryo or fetus.

How does a Parvovirus B19 infection happen?

Parvovirus B19 infection can occur anywhere in the world. Parvovirus B19 infection may occur in isolation or present as an outbreak, affecting people living in a particular location more frequently. Outbreaks are most frequent in late winter and early spring, every 3-6 years. B19V is primarily transmitted by the respiratory route. Other transmission routes include hand-to-mouth contact, blood product transfusion and placental transmission (the mother transmits the infection to the embryo/fetus).

Why is B19V infection important?

When B19V infects a pregnant woman, joint pains are usually the only symptoms present in up to 50% of pregnant women. In 30-50% of cases, the infection is transmitted to the fetus. In most cases of Parvovirus B19 infection during gestation, the fetus is not affected, and the infection resolves spontaneously. However, fetal infection can cause severe complications such as fetal loss, anemia, and fetal hydrops (abnormal presence of fluid in the fetus).

What are the things to watch for during the pregnancy?

During pregnancy, fetal involvement (presence of fetal hydrops or increased fetal heart size) and signs of fetal anemia (increased blood velocity in cerebral blood vessels) should be assessed by ultrasound. Polyhydramnios (increased amniotic fluid) and placentomegaly (placental thickness >6 cm) are often associated.

Should I have more tests done?

- If your doctor confirms maternal parvovirus B19 infection during the first 20 weeks of gestation a fetal ultrasound should be performed to assess fetal signs of infection and detect fetal anemia. Fetal anemia screening should be performed in pregnancies above 18 weeks every 1-2 weeks until 12 weeks after maternal infection.
- An invasive technique should be performed when ultrasound data of fetal involvement is observed (cordocentesis: insertion of a needle into the womb to extract blood from the umbilical cord). If fetal anemia is confirmed, intrauterine blood transfusion is indicated. Sometimes more than one transfusion may be necessary.

Where should I deliver? Where will the baby receive the best care after it is born?

Delivery at a tertiary level hospital will not be necessary in most cases, it will be decided by the obstetric caregiver but in most cases delivery in a tertiary care center will not be required. The performance during the gestation of an intrauterine transfusion that has been effective and has corrected fetal anemia is not an absolute indication for delivery in a tertiary care center.

What does it mean for my baby after it is born?

Parvovirus B19 infection does not cause congenital disorders in the fetus. Therefore, in most cases of B19V infection during gestation, the fetus is not affected, and the infection resolves spontaneously.

Parvovirus B19 infection in the absence of fetal hydrops and anemia does not appear to cause long-term neurological morbidity. Still, severe anemia and the presence of fetal hydrops may be associated with long-term neurological sequelae, especially in those cases requiring multiple intrauterine transfusions.

Will it happen again?

Parvovirus B19 confers permanent immunity in immunocompetent people, so once infected with B19V there is no risk of recurrence.

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