**Introduction:** Parvovirus B19 infection is related to an adverse pregnancy outcome. Universal screening is not recommended but selective screening is performed at our center in patients at risk of exposure, in cases of non-immune fetal hydrops and in cases of fetal death of unknown origin. The aim of the present study is to review our experience during the last 10 years.

**Methods:** Retrospective analysis of pregnant women or fetuses referred to our center for suspected or confirmed infection by Parvovirus B19. The study was conducted from 2005 to 2015. Diagnosis of maternal infection was performed through maternal serology or detection of viral DNA in maternal blood. Fetal infection was confirmed by detection of viral DNA in amniotic fluid or placental tissue in cases of fetal death.

**Results:** From a total of 45 pregnancies, in 19 cases maternal infection was diagnosed after a contact of risk, or after clinical signs of infection. All cases were followed-up until delivery by serial scans without any complications or signs of fetal infection.

On the other hand, fetal infection was confirmed in 28 cases (24 singletons and 2 twins) on the evidence of sonographic abnormalities or fetal death. Among these, there were 19 fetuses with non-immune fetal hydrops, 4 with other signs of infection and in 5 the diagnosis was performed at post mortem after late miscarriage.

Among the hydropic fetuses, 2 evolved to a spontaneous resolution, 5 had a late miscarriage before transfusion and 12 were treated by a cord-blood transfusion (8 with a successful outcome, and 4 with an intrauterine demise).

**Conclusion/Discussion:**
Parvovirus B19 infection is a relevant cause of fetal death and non-immune fetal hydrops in the second trimester.