

Maternal and perinatal outcomes of pregnancies complicated by poxviruses infection: a systematic review and meta-analysis

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Objective. To ascertain the maternal and perinatal outcomes of pregnancies complicated by poxviruses infections

Materials and Methods. Medline, Embase and Cochrane databases were searched. Maternal death, fetal and neonatal death, preterm birth and vertical transmission were observed. Sub-group analyses according to the severity of maternal infection, gestational age at infection, vaccination status and pregnancy status were also performed. Random effect meta-analyses of proportion and risk assessment were used to analyse the data.

Results. 1251 pregnancies with smallpox, 7 with monkeypox and 23 with *molluscum contagiosum*. In pregnancies affected by smallpox infection, maternal death occurred in 34.2% of the cases, miscarriage and intra-uterine fetal death in 10.2% and 26.4%. Vertical transmission was documented in 9.4% of cases. The

risks of maternal death, miscarriage or preterm birth were not different when comparing infection acquired in the first, second or third trimester of pregnancy. The risk of maternal death was significantly higher in cases complicated by hemorrhagic disease. In pregnancies complicated by monkeypox infection miscarriage and intrauterine fetal demise occurred in 43.5% and 33.2% of cases. More than one third of the infected pregnancies presented fetal anomalies at birth or death. Features of the disease were observed in the fetus in 70.8% of the cases. Only two studies with molluscum contagiosum in pregnancy were included, suggested an uneventful course of the infection. **Conclusions.** Pregnancies complicated by smallpox and monkeypox infection are at enhanced risk of adverse maternal and perinatal outcomes. *Molluscum contagiosum* does not seem to be associated with excess maternal or perinatal risks.