

Monkeypox infection in pregnancy: a systematic review and meta-analysis

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Objective. The main aim of this systematic review was to ascertain the maternal and perinatal outcomes of pregnancies complicated by monkeypox infection.

Materials and Methods. Medline, Embase and Cochrane databases were searched utilizing combinations of the relevant medical subject heading terms, key words, and word variants for "monkeypox" and "pregnancy". The outcomes observed were miscarriage, intra-uterine, neonatal and perinatal death, preterm birth, vertical transmission, maternal symptoms. Meta-analysis of proportion was used to analyze the data.

Results. Four studies were included. All women included in the present systematic review presented symptoms and signs of monkeypox infection. There was no case of maternal death. Miscarriage occurred in 39% (95%CI 0-89.0) while intra-uterine in 23.0% (95%CI 0-74.0) of cases. The overall

incidence of late fetal and perinatal loss was 77.0% (95%CI 26.0-100), while only 23% (0-74.0) of the included fetuses survived to birth. The incidence of preterm birth prior to 37 weeks of gestation was 8.0% (0-62.0). Vertical transmission occurred in 62.0% (3.0-100) of cases. When stratifying the analysis according to gestational age at infection, fetal loss occurred in 67.0% (95%CI 9.0-99.0) of cases with first trimester and 82.0% (95%CI 17.0-100) of those with second trimester infection.

Conclusions. Monkeypox infection in pregnancy is associated with a high risk of perinatal loss and vertical transmission. The preliminary results are affected by the very small number of cases included and highlights the need for a thorough maternal and fetal surveillance in pregnancies complicated by Monkeypox infection.