Procedure Related Fetal Loss Following Chorionic Villus Sampling After Screening For Down Syndrome

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Introduction: To determine institutional procedure-related fetal loss rate after CVS and factors which may identify pregnancies at increased risk of having a procedure-related loss.

Material and Methods: Pregnancy outcomes were retrieved on all women having a singleton pregnancy undergoing a CVS procedure between 2004 and 2013 at a University hospital in Hong Kong. Procedure loss incidence due to unintended miscarriages adjusted for the background loss incidence of spontaneous miscarriage in women who did not have a CVS performed was determined. Multivariate regression was performed to examine factors contributing to an unintended fetal loss and spontaneous abortion.

Results: CVS was performed on 1906 fetuses. The procedure-related fetal loss rate was 0.17% (95% CI -0.2 to 0.7%). Maternal age, increased nuchal translucency thickness and decreased PAPP-A MoM levels were not significantly associated with unintended fetal loss in women undergoing CVS. Decreased PAPP-A MoM (OR: 0.27 95%CI 0.08-0.98, p=0.046) was associated with spontaneous abortion in women who did not undergo a CVS. Patient-specific prediction of spontaneous abortion in women who did not undergo CVS was not statistically significant (AUC= 0.56; 95%CI 0.49-0.6, p=0.14)

Conclusions: The CVS related fetal loss rate adjusted for background loss was 0.17%. Pregnancies with reduced PAPP-A carry an increased risk of miscarriage irrespective of whether they had undergone an invasive procedure.

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