

Fetal sex and external cephalic version success

Ambrogio P. Londero ^{1,*}, Anjeza Xholli ¹, Claudia Massarotti ¹, Arrigo Fruscalzo ², Angelo Cagnacci ¹

¹ Academic Unit of Obstetrics and Gynaecology, Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Infant Health, University of Genoa, IRCCS Policlinico San Martino, Genoa, Italy.

² Clinic of Obstetrics and Gynecology, University Hospital of Fribourg, Fribourg, Switzerland.

DOI: 10.36129/jog.2022.S102

Objective. This study aims to assess the role of fetal sex on the success and failure rate of the external cephalic version (ECV) in breech fetuses. Secondary outcomes were fetal presentation in labor and mode of delivery.

Materials and Methods. This cross-sectional study examined live birth certificates from 2003 through 2020 from US states and territories that implemented the 2003 revision. A total of 149,671 single pregnancies with information about ECV success or failure were included. The outcome was ECV success/failure, while the primary exposure was fetal sex. Other known factors associated with the outcome were also considered.

Results. There were 96,137 (64.23%) successful ECV procedures. After adjusting for possible confounding factors, the female sex was associated with an increased ECV failure (OR

1.08, 95%CI 1.03-1.13, $p < 0.05$). Additional significant risk factors for ECV failure were high pre-pregnancy BMI, nulliparity, and small for gestational age fetuses. Younger maternal age, black and American Indian and Alaska Native race categories were significantly protective factors against ECV failure. The prevalence of vaginal delivery in successful ECV was significantly higher in female compared to male fetuses (73.18% vs 70.06%, $p < 0.05$).

Conclusions. The present results found the female fetal sex to be negatively correlated to ECV success but positively correlated to a vaginal birth in the case of ECV success. These findings can potentially improve the knowledge about factors involved in the ECV procedure, allowing more informed counseling for women undergoing this procedure.