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Fetal blood group screening: an audit at Guy's and St. Thomas' Hospital, London

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Objective

Recent data suggest that the non-invasive prenatal diagnosis has nearly 100% accuracy for the fetal blood group phenotype. If a fetus of a Rh negative women is predicted to have the same phenotype then anti-D prophylaxis is not needed. The benefits are firstly, that those women will not receive unnecessarily anti-D injections which is a blood product and carries some disadvantages, and secondly the subsequently cost benefit from not giving the additional treatment. The principal objective of this study is to evaluate the effectiveness and accuracy of the cell free DNA test for fetal blood group testing in Rh negative pregnant women. We also aim to assess if the test is cost benefit as opposed to giving prophylactic Anti-D immunoglobulin to everyone. Lastly, we will evaluate the implementation of the test's results by the staff, meaning whether any anti-D injections were mistakenly given in cases of Rh negative fetuses.

Methods

Data were retrospectively collected from the Fetal Blood Group Clinic at Guy's and St Thomas' Hospital in London, UK, since the establishment of the clinic in January 2020 until today. The data are being processed including the follow information: gestational age at the test, prenatal test's results (incidence of Rh negative, positive fetuses and inconclusive results), incidence of rejected samples requiring repeat test, amount of anti-D injections issued and postnatal blood group testing. The prenatal results will be compared with the postnatal ones to assess if there were any false positive/negative results.

Results

We are currently collecting and analyzing our data and our results will be available in the next couple of months. Since January 2020, about 2023 women were offered the Fetal Blood Group screening test. The available results include 1126 Rh positive fetuses, 577 negative and 135 inconclusive results, while the rest declined testing for various reasons. Our final results will include the exact number of tests performed, their results, women who declined the test and the reason, the amount of anti-D injections issued to women with Rh positive fetuses, the amount and cost saved from not giving anti-D injections for Rh negative fetuses, the amount, the incidence of false prenatal results, any Anti-D injections given mistakenly.

Conclusion

We aim to present our conclusions at the FMF Congress after the final analysis of our data.