



Review of prenatal invasive testing at Rahima Moosa Mother and Child Hospital

Georgiou C, Lombaard H, Wise A

University of the Witwatersrand, Johannesburg, South Africa

Objective

Invasive prenatal testing is the gold standard of prenatal diagnosis of chromosomal abnormalities. Outcomes of invasive prenatal procedures have been studied previously, however it has not been looked at in a resource poor, tertiary setting in South Africa. The aim of this study is to review the outcome of invasive prenatal testing at Rahima Moosa Mother and Child Hospital (RMMCH) from January 2014 to May 2016. The main objectives of the study were to evaluate invasive prenatal testing in terms of indications, ultrasound markers, cytogenetic diagnosis, complications and pregnancy outcome.

Methods

The study took place at RMMCH, a regional academic hospital in Johannesburg which performs approximately 12 000 deliveries annually. Charts were reviewed retrospectively for patients who underwent invasive prenatal testing.

Results

Ninety-seven patients were identified and 96 results obtained. The main indication for invasive prenatal testing was abnormal ultrasound findings followed by advanced maternal age. In total, 12, 5% of test results were abnormal, including two patients with Trisomy 13, two with Trisomy 18, two with Trisomy 21, two with Klinefelter syndrome, one with a balanced translocation, one with cystic fibrosis, one with spinal muscular atrophy and one with Wolf-Hirschorn syndrome. The miscarriage rate was 1, 5%. There were four terminations of pregnancy directly related to an abnormal invasive test result.

Conclusion

It is expected that in a resource restricted area where biochemical screening is not available that advanced maternal age and ultrasound findings are the main reasons to lead to invasive prenatal testing. The rate of abnormalities found is higher than internationally quoted and the miscarriage rate higher than the internationally accepted 0, 5-1%, this is likely due to selection bias and sample size. The study shows that an invasive testing service can be successfully run in a resource restricted setting but ongoing education of the availability of the service in the public sector is needed.