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Is there a correlation between maternal serum sFlt-1/PlGF ratios and birth-weight centiles?



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the royal women's hospital

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Introduction

There is growing evidence that an elevated ratio of maternal serum soluble fms-like tyrosine kinase 1 (sFlt-1) and placental growth factor (PlGF) is a clinically useful biomarker of placental dysfunction.

As such, it has been studied as a predictor of preeclampsia and fetal growth restriction secondary to placental insufficiency.

Both preeclampsia and fetal growth restriction secondary to placental insufficiency are also associated with reduced fetal growth and thus birth-weight.

Consequently, it is to be expected that there is a negative correlation between maternal serum sFlt-1/PlGF ratios and birth-weight centiles.

Objectives

The aim of this study was to test for a correlation between maternal serum sFlt-1/PlGF ratios and birth-weight centiles

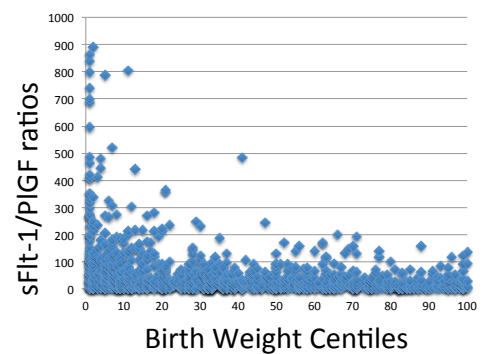
Methods

A retrospective observational study of 918 pregnancies was undertaken. This involved the correlation of maternal serum sFlt-1/PlGF ratios (using ratio results taken closest to delivery) and birth-weight centiles.

Results

A highly statistically significant Spearman rank correlation coefficient of -0.298 (p -value < 0.00001) was found.

Figure 1: sFlt-1/PlGF ratios in comparison with Birth Weight Centiles



Conclusion

This highly statistically significant result supports the use of this biomarker ratio as an indicator of placental dysfunction/insufficiency.

References

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