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**Maternal circulating PlGF concentrations and placenta-related pregnancy complications: First results from the CoLab AngF Study.**

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**Abstract**

**INTRODUCTION:**

Circulating angiogenic factors are potential markers for preeclampsia, but heterogeneous studies have failed to identify precise predictive/diagnostic properties. The Global CoLaboratory is investigating how to merge published data of angiogenic factors for meta-analysis on an individual sample basis.

**OBJECTIVE:**

To amalgamate pregnancy angiogenic factor studies, investigate diagnostic and predictive properties of these markers in preeclampsia and placenta-related pregnancy complications, and to test if measures from disparate platforms can be standardised. This is the first report using PlGF measures to diagnose preeclampsia.

**METHODS:**

Data were derived from 15 cohorts, within and outside the CoLaboratory network. Women were classified as either case (confirmed diagnosis of preeclampsia at sampling) or non-case (no preeclampsia at sampling). Individual PlGF measurements from four different analytical platforms were used, along with transformations of the data (e.g. log-transformations, transformations to a baseline platform). Transformed measurements were standardised both for specific platforms and globally, stratifying on gestational age. Different statistical techniques were compared.

**RESULTS:**

The database currently contains 1442 cases and 11,512 non-cases, which were used to define an algorithm to merge PlGF measurements from different platforms. Non-case distributions were used to standardise case results. Diagnostic PlGF measurements in relation to preeclampsia will be presented and confirm feasibility.

**CONCLUSIONS:**

Future studies can extend this approach to other angiogenic factors, prediction as well as diagnosis and to other placenta-related disorders.

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