

## Correlation between angiogenetic biomarkers, urinary protein values and ascites in women with hypertensive disorders of pregnancy

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**Objective.** To investigate the correlation between sFlt-1/PlGF ratio, the 24-h urinary protein and the presence of maternal ascites in a population of women with new-onset Hypertensive Disorders of Pregnancy (HPD).

**Materials and Methods.** Retrospective study including a cohort of women with new-onset HDP carrying a singleton viable pregnancy between 22 and 36 gestational weeks. At diagnosis, sFlt-1 and PlGF were assessed using Brahms Kryptor and the ratio was calculated. The amount of proteins on the 24 h urine was also investigated and a value  $> 5 \text{ g}/24 \text{ h}$  was used to define massive proteinuria. The presence of ascites was defined in if abdominal free fluid was detected at ultrasound examination.

**Results.** A total of 80 patients were included for the study purpose. A linear correlation was found between the sFlt-1/PlGF ratio and the 24 h urinary-protein values ( $R^2 = 0.21$ ;  $p < 0.001$ ). A massive proteinuria was detected in 17 women; sFlt-1/PlGF ratio had an AUC of 0.86 for predicting the presence of massive proteinuria with a cut-off value of 310.9 (sensitivity 88.2%, specificity 71.0%). Ascites was detected in 6 women; significantly higher values of sFlt-1/PlGF ratios were found in this group of women compared with those without ascites ( $1,322.0 \pm 1,083.0$  vs  $423.0 \pm 734.0$ ).

**Conclusions.** Higher values of sFlt-1/PlGF ratios are associated with higher levels of urinary protein and higher incidence of maternal ascites.