

[EP08.61] Severity stages of fetal growth restriction according to sFlt-1/PIGF ratio

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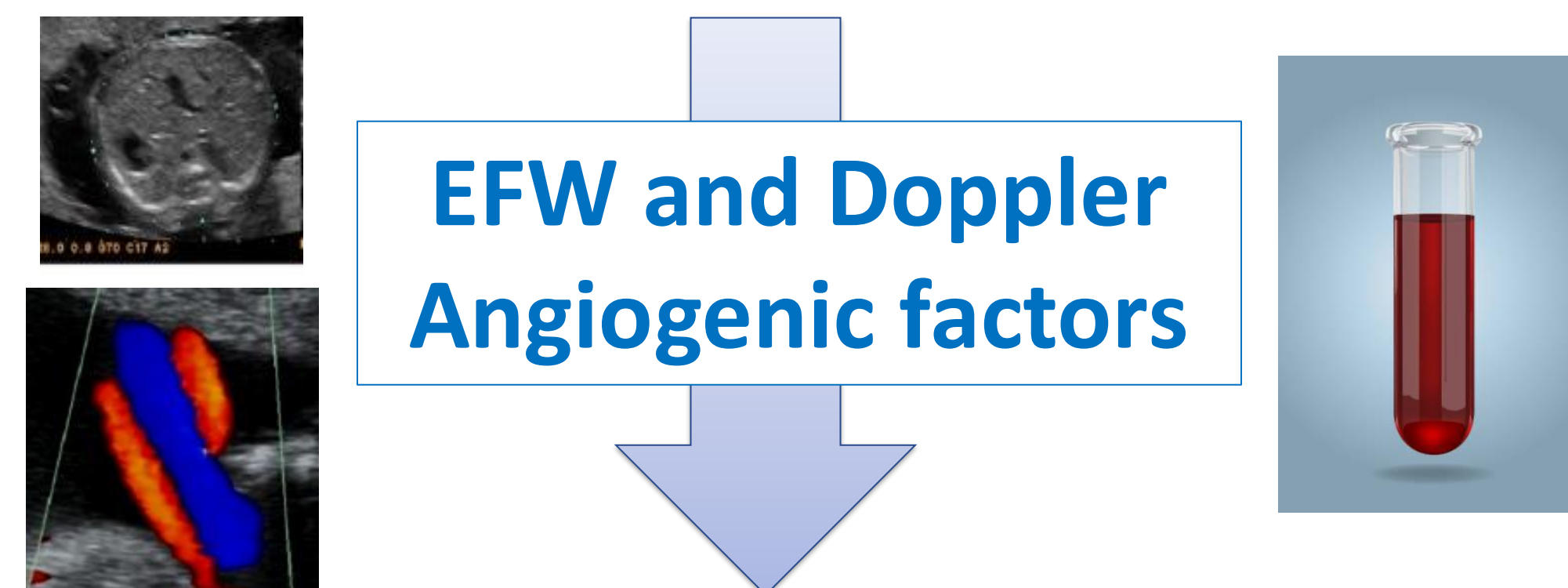
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Objective

To investigate the the profile of maternal angiogenic factors across severity stages of FGR compared to controls, stratified by the presence or absence of preeclampsia.

Methods

- ✓ 1028 singleton pregnancies
 - 424 controls
 - 604 small fetuses (EFW and birthweight <10th centile)
- ✓ Diagnosis in the 3rd trimester



EFW and Doppler
Angiogenic factors

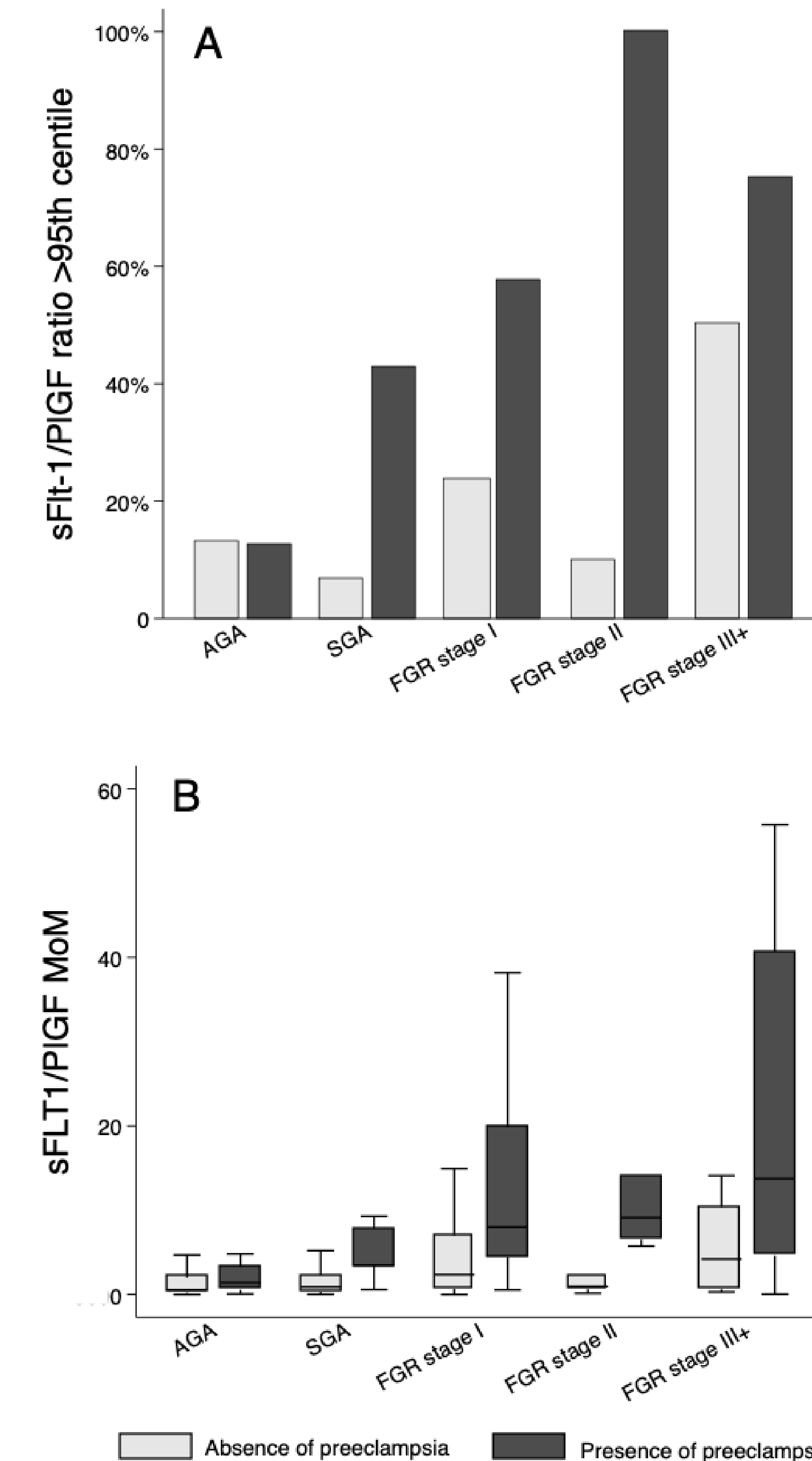
SGA/FGR severity stages

Figueras & Gratacos FDT 2014

Results

Among controls (N=424), SGA (N=192), FGR I (N=380), FGR II (N=16) and FGR III-IV (N=16), the proportion of cases with sFlt-1/PIGF ratio >95th centile was 12.7%, 7.8%, 30.8%, 43.8% and 62.5% respectively (p=0.0001). Preeclampsia was diagnosed at any time between inclusion and delivery in 1.9% of controls, 3.7% of SGA, 21.5% of FGR I, 37.5% of FGR II and 50.0% of FGR III-IV. Among all small fetuses with and without preeclampsia, sFlt-1/PIGF ratio >95th centile was 56.9% vs 15.4% (P<0.001).

Fig. A) Proportion of sFlt-1/PIGF ratio >95th centile and B) Box plots of median and interquartile range of sFlt-1/PIGF ratio MoMs across SGA and FGR severity stages according to the presence or absence of preeclampsia.



Conclusions

Abnormal levels of angiogenic factors increased across the severity stages of small fetuses. This association with severity was enhanced in the presence of preeclampsia. However, their absolute values showed substantial overlap both in the presence and the absence of preeclampsia which makes their use in determining FGR severity stages challenging.

SGA, small for gestational age; EFW, estimated fetal weight; PIGF, placental growth factor; sFlt-1, soluble FMS like tyrosine kinase-1; MoM, multiple of medians.