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Effect of endothelial therapy on asymptomatic angiogenic imbalance in pregnancy

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Objective

To evaluate the effect on angiogenic markers of treatment with nitric oxide (NO) precursor, L-Arginine, in pregnancies with asymptomatic angiogenic imbalance.

Methods

Twenty singleton pregnancies with angiogenic imbalance were treated with off-label oral L-Arginine. We compared the endothelial therapy group to a historical angiogenic unbalanced untreated group, and to a low-risk angiogenic balanced group. Basal to follow-up longitudinal changes in maternal circulating levels of placental growth factor (PlGF), soluble fms−like tyrosine kinase−1 (sFlt−1), and the ratio, as multiples of the median (MoM), were analysed.

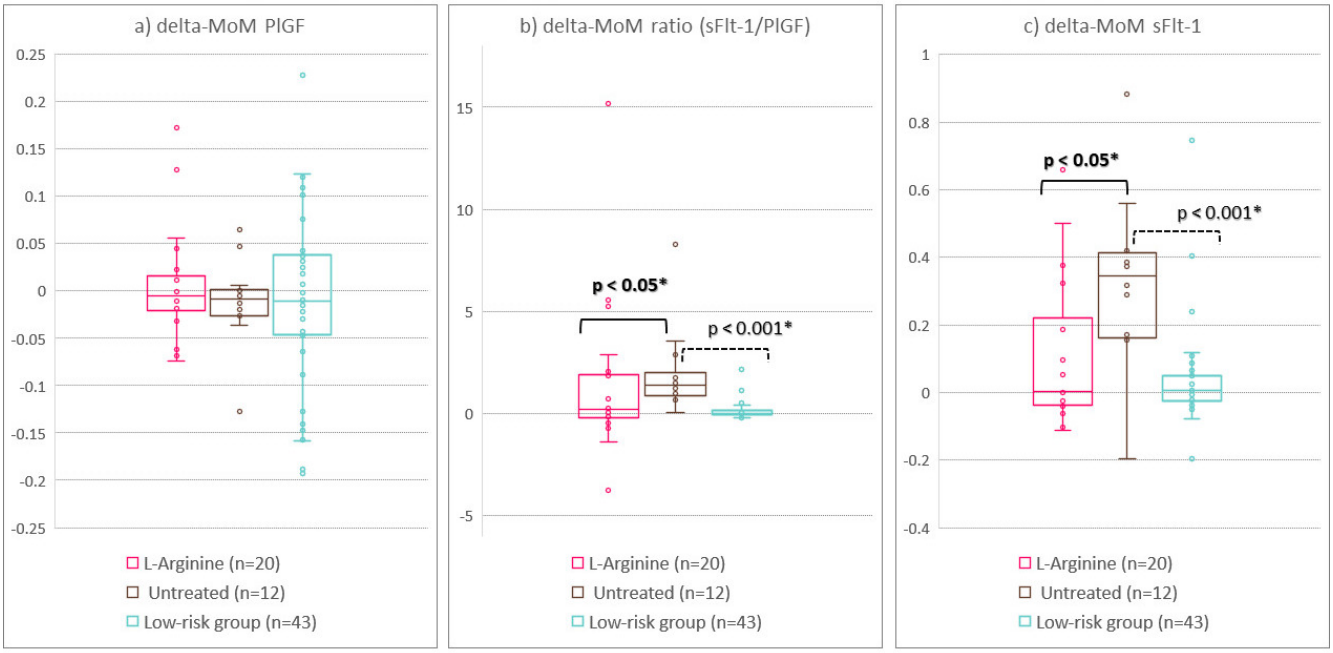
Results

At basal test, the unbalanced groups were similar in terms of PlGF, sFlt-1 and ratio MoM; the balanced group was similar in gestational age to the treated group. In the endothelial therapy group, we found a significant lower delta-MoM-ratio, and a lower delta-MoM-sFlt-1 than in the untreated group; nonetheless, significantly higher than in the low-risk balanced group.

Conclusion

The endothelial therapy based on NO precursor administration in pregnancies with asymptomatic angiogenic imbalance apparently arrests significantly the pathologic anti-angiogenic progression, but significantly far from the natural pro-angiogenic evolution.

Figure (3045): Angiogenic δ-MoM in time, by study group



(*) Significant differences between groups by Wilcoxon rank sum test