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Titel des Beitrags: Angiogenic factors vs Doppler surveillance in the prediction of adverse outcome among late-pregnancy small-for-gestational-age fetuses.

Abstract: To compare the value of Doppler surveillance with maternal blood angiogenic factors at diagnosis for the prediction of adverse outcome in late-pregnancy small-for-gestational-age (SGA) fetuses. In a cohort of 198 SGA fetuses we evaluated the association of Doppler indices (mean uterine artery pulsatility index (UtA-PI) and cerebroplacental ratio (CPR)) and angiogenic factors (maternal serum levels of soluble fms-like tyrosine kinase-1 (sFlt-1) and placental growth factor (PlGF)) with the development of pre-eclampsia and adverse perinatal outcome (operative delivery for non-reassuring fetal status or neonatal metabolic acidosis). In SGA fetuses subsequently developing pre-eclampsia, mean UtA-PI (P < 0.001), sFlt-1 MoM (P < 0.001) and sFlt-1/PlGF MoM ratio (P < 0.001) were higher, while PlGF MoM was lower (P = 0.004). In SGA fetuses with adverse perinatal outcome, CPR (P < 0.002) and PlGF MoM (P < 0.001) were lower, and sFlt-1/PlGF MoM ratio was higher (P = 0.001). For predicting pre-eclampsia, the areas under the receiver-operating characteristics (ROC) curves for mean UtA-PI, sFlt-1 MoM and the combination of both were 0.852, 0.839 and 0.860, respectively. For adverse perinatal outcome, the areas under the ROC curves for CPR, PlGF MoM and the combination of both were 0.652, 0.656...
and 0.684, respectively. The combination of Doppler indices and angiogenic factors did not significantly improve prediction of either pre-eclampsia (P = 0.851) or adverse outcome (P = 0.579). In SGA fetuses, angiogenic factors at diagnosis and follow-up with Doppler ultrasound both predict adverse outcome with a similar performance. Copyright © 2013 ISUOG. Published by John Wiley & Sons Ltd.