Maternal hyperuricemia in normotensive singleton pregnancy: A prenatal finding with continued perinatal and postnatal effects

Mahid Sheikh
Tehran University of Medical Sciences, Iran

Background: To assess the association of maternal hyperuricemia with adverse pregnancy outcome and neonatal metabolic, neurologic and respiratory disturbances in normotensive singleton pregnant women.

Method: This prospective multicentric cohort study was conducted on 404 normotensive singleton pregnant women who were admitted for delivery in Vali-Asr and Akbar-Abadi teaching hospitals of Tehran University of Medical Sciences, Tehran, Iran. Upon enrollment maternal and umbilical sera were obtained for determining uric acid levels. 1 and 5 minutes Apgar scores, the need for neonatal resuscitation and neonatal intensive care unit (NICU) admission were recorded. In case of NICU admission a neonatal blood sample was drawn for determining uric acid, blood sugar and bilirubin levels. An intracranial ultrasound imaging was also carried out for the admitted neonates for detecting intraventricular hemorrhage.

Results: Maternal hyperuricemia (uric acid one standard deviation greater than the appropriate gestational age) was independently associated with preterm birth (odds ratio (OR), 3.17; 95% confidence interval (CI), 2.1 - 4.79), small for gestational age delivery (OR, 1.28; 95% CI, 1.04 - 2.57), NICU admission (OR, 1.65; 95% CI, 1.12 - 2.94) and neonatal IVH (OR, 8.14; 95% CI, 1.11 - 87.1).

Conclusions: Maternal hyperuricemia in normotensive singleton pregnant women is significantly associated with preterm and SGA delivery and the development of neonatal IVH.

Biography
Mahdi Sheikh graduated from Medical School of Tehran University of Medical Sciences. He worked as Research Assistant for five years in Rheumatology Research Center and also in Maternal, Fetal and Neonatal Research Center of Tehran University of Medical Sciences. He has published and presented several papers in different world congresses and has attended courses in Internal Medicine at Harvard Medical School in 2012. Currently, he serves as the Scientific Writing and Research Methodology Program Coordinator at Tehran University of Medical Sciences and is a Research Fellow and Reviewer in Maternal, Fetal and Neonatal Research Center/Tehran University of Medical Sciences. He is a member of the European Society of Gynecology (ESG) since 2013.

mahdisheikh@gmail.com