



Growth patterns of severe preeclampsia cases: a retrospective cohort study

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Objective

The primary objective of this retrospective study is to assess the prevalence and severity of growth restriction (estimated weight below the 10th centile) in severe (blood pressure >160/110mmHg and/or end-organ damage and/or significant proteinuria) early onset (less than 34 weeks) preeclampsia patients without prior aspirin administration.

Methods

This is a retrospective cohort study conducted between Jan 01 2012 and Dec 31 2015 at the Archbishop Makarios III Hospital in Nicosia Cyprus. The cohort were 69 severe, early onset preeclampsia singleton cases, that were diagnosed and managed according to the protocol described above. Customized growth charts were used for estimated fetal growth (EFW) calculation, by use of the Hadlock formula. Doppler studies (umbilical artery and middle cerebral artery pulsatility index) were conducted in all cases. EFW below the 5th centile was considered as intrauterine growth restriction (IUGR) and between the 6th-10th centile as small for gestational age (SGA). Decision to deliver included refractory hypertension, end-organ damage and growth restriction with abnormal doppler studies.

Results

More than 50% of neonates born from severe preeclampsia women are IUGR (47. 82%) or SGA (14. 49%). The rest of cases are either adequate for gestational age (AGA) 33. 44%) or large for gestational age (LGA) (5%). Mean birth weight is 1868. 10gr for a mean birth age of 33. 48 weeks, which is equivalent to the 5th centile for age. Most of the cases had an iatrogenic preterm delivery (92. 76%) while the rest a term delivery (7. 24%). Most of the cases delivered between 31-34 weeks (50. 72%), while 24. 63% between 35-37 weeks and 16. 00% between 24-30 weeks.

Conclusion

Severe early onset preeclampsia is significantly associated with growth restriction as the majority of cases (63%) are born below the 10th centile for age at birth. 48% out of 63% are considered as IUGR as birth weight is below 5th centile. Prematurity is also a severe complication as the mean age of birth is 33. 48 weeks. Further prospective studies are required to assess the effect of aspirin administration from 12-35 gestational weeks on reducing IUGR and severe early onset preeclampsia.