

Small for gestational age as a risk factor for stillbirth: effect of gestational age

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Background: Stillbirth prevention is a national priority for the UK. Recent UK data have demonstrated that the risk of stillbirth is significantly reduced when small for gestational age (SGA) is detected antenatally. The main aim of this study was to investigate SGA as a risk factor for stillbirth

Methods: This was a cohort study of 75,123 singleton pregnancies including 8860 (11.8%) that delivered SGA neonates (birthweight <10th centile) and 394 (0.5%) stillbirths. Pregnancies complicated by major structural abnormality or aneuploidy, or those undergoing termination, were excluded. Regression analysis was used to identify risk factors and ROC curve analysis to assess the predictive accuracy.

Results: More than one third (34.3%) of stillbirths occurred at term; less than half (47.2%) were SGA. However, this varied from 56.8% in preterm to 28.9% in term stillbirths. Multivariate logistic regression analysis identified SGA (OR 10.86;95% CI 7.98-14.78;p<0.001), maternal body mass index (BMI) (OR 1.05; 95% CI 1.02-1.07; p<0.001), fertility treatment (OR 1.43;95% CI 1.05-1.95;p=0.023), pre-pregnancy hypertension (OR 1.55;95% CI 1.13-2.13;p=0.007) and previous stillbirth (OR 3.52;95% CI 2.12-5.82;p<0.001), as independent predictors of the risk of preterm stillbirth, while only SGA (OR 2.93;95% CI 1.96-4.40;p<0.001) and maternal BMI (OR 1.05;95% CI 1.03-1.08;p<0.001) were significantly associated with term stillbirth. These risk factors had AUC of 0.71 (95% CI 0.67-0.75) and 0.61 (95% CI 0.56-0.67) for the prediction of preterm and term stillbirth, respectively.

Conclusions: Strategies to prevent stillbirth which focus on the antenatal identification of SGA fetuses only are likely to miss the majority of term stillbirth cases.