

EP16.35 Adverse maternal outcomes in deliveries complicated by hypoxic-ischemic encephalopathy

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Objectives

There is a paucity of data on maternal adverse outcomes among deliveries complicated by hypoxic ischemic encephalopathy (HIE). We hypothesized that maternal adverse outcomes are significantly higher in case of HIE.

Methods

This is a secondary analysis of Assessment of Perinatal Excellence (APEX), which was a multicenter, prospective observational study collected from 25 centers from 2008-11. The inclusion criteria were non-anomalous, live-born, singletons at >35 weeks, with data on the presence of HIE, defined as ≥ 3 abnormal findings across six neonatal neurologic examination domains. Composite adverse maternal outcomes (CAMO) included chorioamnionitis, 3rd or 4th degree lacerations, blood transfusion, admission to the intensive care unit, hysterectomy, or death. Composite surgical maternal morbidity (CSMM) included ureteral injury, laparotomy, uterine artery ligation, cystotomy, hypogastric ligation, B-lynch stitch, uterine balloon / packing or bowel injury. Multivariable Poisson regression models were used to estimate the association between HIE and adverse outcomes. Adjusted incidence rate ratio (aIRR) with 95% confidence intervals (CI) were calculated.

Results

Of the 118,422 deliveries in APEX, 93,031 (78.6%) met the inclusion criteria, and among them, 871 (0.9%) had HIE. Nulliparity was significantly more common in deliveries with HIE than without ($p < 0.01$), as was government-assisted insurance ($p = 0.02$), hypertensive disorder of pregnancy ($p < 0.01$) and diabetes ($p < 0.01$). Cesarean delivery occurred in 36.3% of those who had HIE, versus 20.0% for those who did not ($p < 0.01$). CAMO was 135% higher in deliveries with (20.1%) versus without HIE (8.5%; aIRR 2.01, 95% CI 1.76-2.29). CSMM was 70% higher with HIE (1.1%) than without (0.4%; aIRR 2.65; 95% CI 1.40-4.99).

Conclusion

Among deliveries with hypoxic ischemic encephalopathy, at least 1 in 5 have maternal complications, which is 135% higher than those without encephalopathy. Intervention trials to decrease hypoxic ischemic encephalopathy should address the potential complications for the parturients.