

HYPOXIA-ISCHEMIA AND INFECTION ASSOCIATED WITH SYMPTOMATIC PERINATAL ARTERIAL STROKE IN FULL-TERM INFANTS

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Background: The incidence of perinatal arterial stroke (PAS) is about 1 in 2300 live births. Evidence about the aetiology is still lacking. The aim of this study was to identify maternal, perinatal and neonatal factors predictive of symptomatic PAS in full-term infants.

Methods: Each full-term infant with PAS was matched to three healthy controls for gestational age (< 7 days), date (< 7 days) and hospital of birth. Ante- and perinatal risk factors were studied using univariate and multivariate conditional logistic regression analysis.

Results: Fifty-four infants were diagnosed with PAS. Primipara (65% vs 46%), maternal fever (> 38 °C) (9% vs 1%), fetal heart rate decelerations (63% vs 15%), emergency caesarean section (33 vs 2%), Apgar Score (1 min) ≤ 3 (28% vs 1%), Apgar Score (5 min) < 7 (24% vs 1%), umbilical artery pH < 7.0 (21% vs 2%), hypoglycaemia < 2.0 mmol/L (28% vs 3%) and early onset sepsis/meningitis (13% vs 2%) were significant risk factors in the univariate analysis.

In the multivariate analysis maternal fever (OR 11.0; 95% CI 1.4 - 85.6), Apgar Score (5 min) < 7 (OR 17.1; 95% CI 3.0 - 96.8), hypoglycaemia < 2.0 mmol/L (OR 13.8; 95% CI 3.4 - 54.2) and early onset sepsis/meningitis (OR 7.0; 95% CI 1.4 - 35.5) were significantly associated with PAS.

Conclusion: Fetal distress, maternal fever during delivery and early onset sepsis/meningitis were associated with PAS similar to previous studies. Hypoglycaemia was also associated with PAS, which was previously noted in the preterm infant.