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### Prediction of neurodevelopmental outcome in term neonates with hypoxic-ischemic encephalopathy

**Background:** Hypoxic ischemic encephalopathy may result in many neurological deficits. It is crucial to make early diagnosis and assess the prognosis correctly.

**Aim:** In the present study, we reviewed the factors that might have an impact on long-term prognosis in cases diagnosed with hypoxic encephalopathy and establish markers that can provide guidance in predicting prognosis.

**Methods:** Electroencephalography, neuroimaging, periodic neurological exams and a developmental test at 44-48 months after discharge from the hospital were performed on 25 term newborn infants with clinical evidence of hypoxic ischemic encephalopathy.

**Results:** Normal/mildly abnormal neonatal electroencephalography correlated with favorable outcome, particularly if neuroimaging was normal. The cranial MRI sensitivity was 83.3%, while the specificity was 57.9%, the positive predictive value was 38.5%, and the negative predictive value was 91.6%. Moderate/severely abnormal electroencephalography and multifocal/diffuse cortical or deep gray matter lesions correlated with poor outcome. When the modified Sarnat staging was analyzed in 2 groups as stage 1 and stages 2-3 to examine its effect on development, the sensitivity was 83.3%, the specificity was 52.6%, the negative predictive value was 90.9%, and the positive predictive value was 35.7%.

**Conclusions:** Newborn infants with hypoxic ischemic encephalopathy should be treated in neonatal intensive care units, assessed with periodic neurological examination, electroencephalogram and brain imaging. This would help to initiate early intervention and improve the outcome of patients.

### Biography

Rabia G Sezer has completed her Medical education at Marmara University School of Medicine in 2000 and her Pediatric Fellowship in 2005. She is a Ministry of Health employee, working as a Pediatrician currently at Zeynep Kamil Maternity and Children's Diseases Training and Research Hospital, Istanbul, Turkey. She works with a broad range of patients and particularly focuses on working with the infectious, neurologic and neonatal diseases. She is a Research Fellow at the hospital for more than 4 years and became an Associate Professor in 2014.

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