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Predictors of neurodevelopmental outcome in newborn treated with hypothermia therapy

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Objective: To speculate the early predictors of the neurodevelopmental outcomes among infants treated with therapeutic hypothermia for neonatal hypoxic-ischemic encephalopathy.

Methods: We reviewed the medical records of 28 neonates who underwent hypothermia therapy for neonatal hypoxic-ischemic encephalopathy in the neonatal intensive care unit at Yeouido St. Mary's Hospital of the Catholic University in Korea, between August 2013 and May 2016. Patients were divided according to the neurological outcome at 16-24 months of age into normal group (n=14), patients with normal neurological function, and abnormal group (n=10), patients with neurological disabilities. We compared the clinical characteristics, outcomes, laboratory and MRI findings between the groups.

Results: No significant differences were observed in demographic characteristics between two groups. In clinical outcomes, only brain MRI finding shows significant differences between normal group and abnormal group (21.4% vs. 100.0%, P<0.001), the other outcome findings showed no differences between two groups. In laboratory findings, WBC count on third day showed differences between normal and abnormal group (9.78±3.52 vs. 14.90±3.48, P=0.003).

Conclusion: The most useful predictor of poor neurodevelopmental outcome was abnormal lesions on magnetic resonance imaging in infants with therapeutic hypothermia after perinatal asphyxia.

Biography

Minkyo Chun has completed his Master of Medicine at The Catholic University of Korea in 2014, and started his Internship and Residency course at Catholic Medical Center of Korea. He is the Chief Resident of Yeouido St. Mary's Hospital at the Catholic University of Korea. He has published a case report in a reputed journal.

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