Interhospital transport and intraventricular hemorrhage

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Objective. Intraventricular hemorrhage (IVH) is a leading cause of mortality and morbidity in the preterm infant. Data in current literature are conflicting about the causal relation between IVH and inter-hospital transport. The aim of this study was to clarify the inter-hospital transport role in IVH onset.
Materials and Methods. Retrospective search of preterm IVH cases recovered in Gaslini NICU between 2012 and 2021.
Results. Total cases were 639. Inborn were 522, outborn 117. Median inborn gestational age was 29+5 weeks, 31 weeks in outborn. Inborn median birth weight was 1200 g, outborn 1440 g. Cesarean section was performed for 72.2% inborn and for 65.8% outborn. The median Apgar score at 5 minutes was 8 in both. IVH was detected in 21% of inborn and in 23% of outborn. Considering preterm < 30 weeks, IVH was found in 29% of inborn and in 41% of outborn. Association between outborn status and IVH lacked statistical significance (OR 1.07, p = 0.77), even considering only preterm < 30 weeks (OR 1.65, p = 0.14).
Conclusions. The aim of this study was to compare IVH occurrence in inborn *versus* outborn patients. Our data suggest that transport during the first hours of life of preterm babies could play a role in IVH onset. Several factors related to transport (difficulty of maintaining body temperature, delay in medical interventions and travel-related trauma) could influence the onset of hemorrhage. Although the small sample size did not allow a statistical Significance, our data suggest the importance of maternal transfer to tertiary perinatal centers to allow optimization of perinatal management.