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| **Table 1.**  Clinical, electrophysiological and neuroimaging predictors for antiseizure medication in infants with neonatal clinical seizures (univariate analysis) | | | | |
| **Variables** | **Infants with ASM**  **N=253**  **(38.8%)** | **Infants with**  **seizure–free**  **N=399**  **(61.2%)** | **Total Cohort** | **P value** |
| Duration of ASM (months), Mean±SD | 18.5±6.3 | 4.4±3.3 | 9.9±8.3 | **.001\*** |
| **I. Clinical Characteristics** | | | | |
| Sex  Male  Female | 160  93 | 254  145 | 414(63.5%)  238(36.5%) | .914† |
| Type of birth  Vaginal delivery  Cesarean-section | 99  153 | 162  238 | 261(39.9%)  391(60.1%) | .787† |
| Gestational age at delivery (weeks) | 36.7±4.19 | 37.16±3.99 | 37±4.1 | .234\* |
| Birthweigth(grams), Mean±SD | 2715.3±932.4 | 2869.4±850.3 | 2812±883.8 | **.045\*** |
| Age at seizure onset(hours), Mean±SD | 178.2±210.2 | 168.5±195.6 | 172.1±201.1 | .591\* |
| Clinic Seizure Semiology  Tonic  Clonic  Myoclonic  Epileptic Spasms  Subtle  Sequential  Unclassified | 90  45  24  16  53  22  0 | 71  92  35  8  133  49  2 | 161(25.2%)  137(21.4%)  59(9.2%)  24(3.8%)  186(29%)  71(11.1%)  2(0.3%) | **.001**† |
| Etiology  Structural  HIE  Vascular  Brain Malformations  Genetic  Infection  Metabolic  Unknown | 97  42  39  26  26  17  6 | 167  42  15  39  118  10  8 | 264(40.5%)  84(12.9%)  54(8.3%)  65(9.9%)  144(22.1%)  27(4.1%)  14(2.1%) | .267† |
| ASM at the NICU discharge    Monotherapy  Dualtherapy/Polytherapy | 165  88 | 345  53 | 510(78.3%)  141(21.7%) | **.001**† |
| Positive family history of epilepsy | 39 | 68 | 107(16.4%) | .585† |
| Number of neonatal seizures, Mean±SD | 6±13.6 | 4±6.5 | 4.8±9.9 | .081\* |
| **II. EEG the most pathologic EEG between 1-3 months of age** | | | | |
| Normal  Abnormal  Focal epileptiform activity  Abnormal background  Excessive sharp transients  Burst suppression pattern | 41  212  79  27  73  33 | 221  178  53  39  79  7 | 262(40.2%)  390(59.8%)  132(20.2%)  66(10.1%)  152(23.3%)  40(6.1%) | **.000**† |
| **III. MRI at the 4-8 months of age** | | | | |
| Normal  Abnormal  Ischemia/Hemorrhage  Periventricular leukomalacia  Multicystic encephalomalacia  Corpus Callosum abnormalities  Delayed Myelination  Hydrocephalus  Cortical Dysplasia | 64  186  38  39  51  14  36  7  1 | 220  179  72  27  19  12  38  7  4 | 284(43.7%)  365(56.3%)  110(%16.9)  66(10.2%)  70(10.8%)  26(4%)  74(11.4%)  14(2.2%)  5(0.8%) | **.001**† |
| Missing data for the variable “Clinic Seizure Semiology”: 12 (1.8%).  Missing data for the variable “ASM at the NICU discharge”: 1 (0.2%).  Missing data for the variable “MRI at the 4-8 months of age”: 3 (0.46%).  ASM:Antiseizure medication, EEG: Electroencephalogram,HIE: hypoxic ischemic encephalopathy, MRI:Magnetic resonance imaging, NICU:Neonatal intensive care unit,  \* Student’s t-test was used to compare parametric variables.  †Mann-Whitney U test was used to compare non parametric variables. | | | | |