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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** |
| SexMaleFemale | 16093 | 254145 | 414(63.5%)238(36.5%) | .914† |
| Type of birthVaginal deliveryCesarean-section | 99153 | 162238 | 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 | 9045241653220 | 7192358133492 | 161(25.2%)137(21.4%)59(9.2%)24(3.8%)186(29%)71(11.1%)2(0.3%) | **.001**† |
| EtiologyStructuralHIEVascularBrain MalformationsGeneticInfectionMetabolicUnknown | 9742392626176 | 167421539118108 | 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   MonotherapyDualtherapy/Polytherapy | 16588 | 34553 | 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 AbnormalFocal epileptiform activityAbnormal background Excessive sharp transientsBurst suppression pattern | 4121279277333 | 2211785339797 | 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** |
| NormalAbnormalIschemia/HemorrhagePeriventricular leukomalaciaMulticystic encephalomalaciaCorpus Callosum abnormalitiesDelayed MyelinationHydrocephalusCortical Dysplasia  | 64186383951143671 | 220179722719123874 | 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.  |