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Introduction:

Epilepsy is one of the most common complex neurological disorders in humans with up to 2% of people being diagnosed with epilepsy at some point in their life.

Incidence of epilepsy: - in the general population: 1-2%

- in ASD: 20-40%

incidence of epileptiform changes: - in the general population: 2-4%

- in ASD: 50-80%

Autism spectrum disorder (ASD) is a common, childhood developmental disorder, characterized by impairment in social interaction and communication, and stereotypical behavior. According to current literature, the most frequent risk factor for epilepsy are both genetic and environmental, with effect in pre, peri or postnatal period, such as: structural lesions of the brain- malformation, stroke, HIE, brain surgery, brain trauma, intellectual disability, other psychiatric disorder- ADHD, anxiety, Landau-Kleffner, West syndrome, TSC,

N.B. : A large percentage of children with ASD and epileptiform changes on the EEG will never develop epilepsy.

Objectives:

Materials and methods:

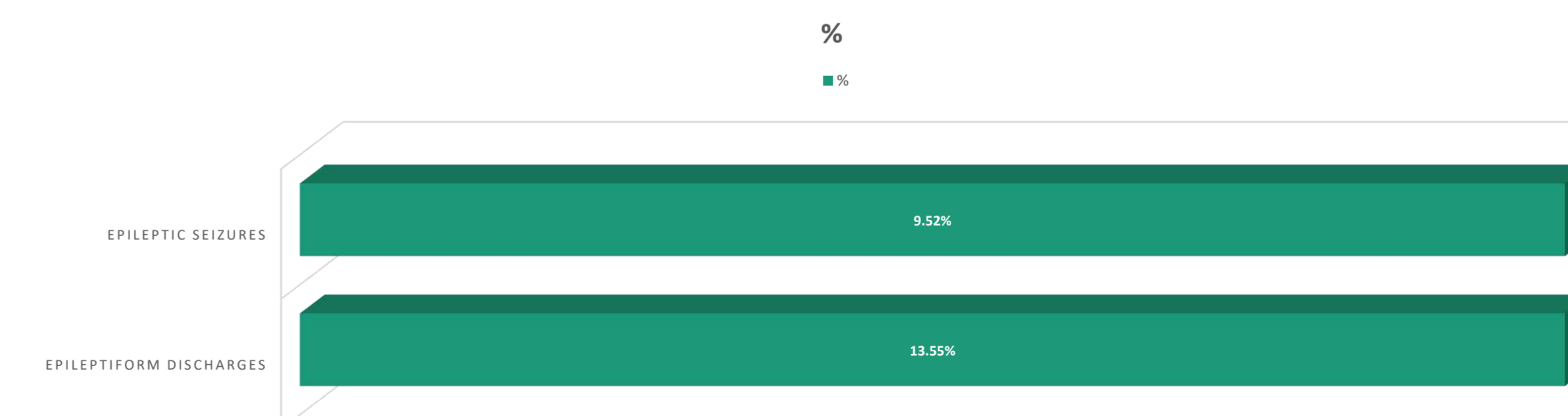
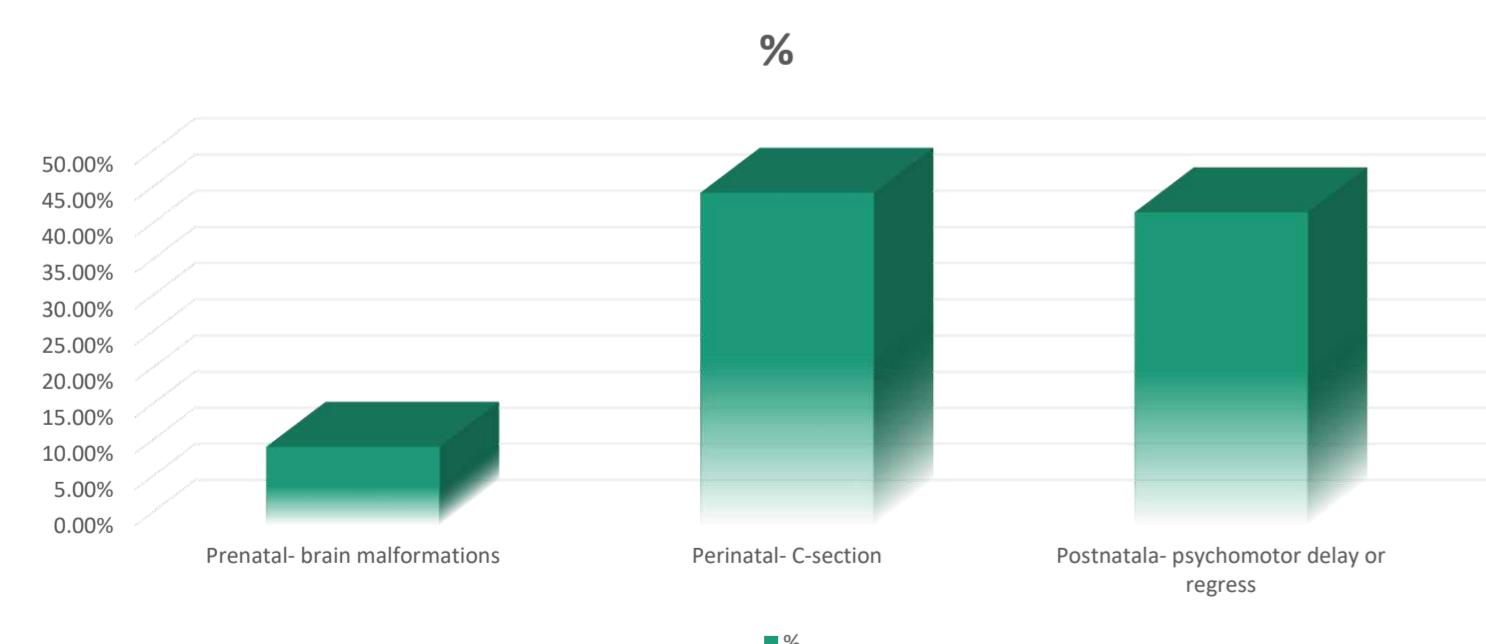
Current literature reports co-occurrence of ASD and epilepsy in 20-40% and epileptiform discharges in 1340%. Our purpose is to evaluate the risk of epileptiform discharges in children with ASD.

273 children with ASD were included in this study. The diagnosis of ASD was made according with ICD-10 criteria and using specific ASD tests (ADOS, ADI-R). All children have undergone clinical, neurological, psychiatric evaluation and detailed history regarding pre, peri, postnatal events was obtained. EEG studies were performed. The presence of epileptiform discharges was analyzed in correlation with different prenatal, perinatal and postnatal risk factors, including infections, hypoxic-ischemic events, C-section, Apgar score, psychomotor delay/regress. For data analysis we used IBM SPSS22 software by applying Chi² for association.

Results:

13,55% of ASD children had epileptiform discharges, and 9,52% presented epileptic seizures. The most frequent risk factors associated with epileptiform discharges/epilepsy were C-section (45.94%), psychomotor delay or regress (43,24%), and brain malformations (10,81%).

Significant statistical correlation was established between the diagnosis of epilepsy and C-section ($X^2=0.175$, $p=0.042$), motor delay ($X^2=0.93$, $p=0.047$) and regress ($X^2=5.45$, $p=0.035$).



Objectives:

Acknowledgment:

Children with ASD have a higher prevalence of epileptiform discharges and epilepsy than general population. Epileptiform discharges

alone in ASD are not a high-risk factor. An important prevalence of C-section, motor delay and regress were observed.

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