



Exploring the connection between Autism and Epilepsy

Gulati Sheffali, Kamila Gautam, Mahesan Aakash, Ragunathan Kaushik, Choudhary Puneet, Ojha Sakshi

Centre of Excellence and Advanced Research for Childhood Neurodevelopmental Disorders, Child Neurology Division, Department of Pediatrics,
All India Institute of Medical Sciences, New Delhi, India

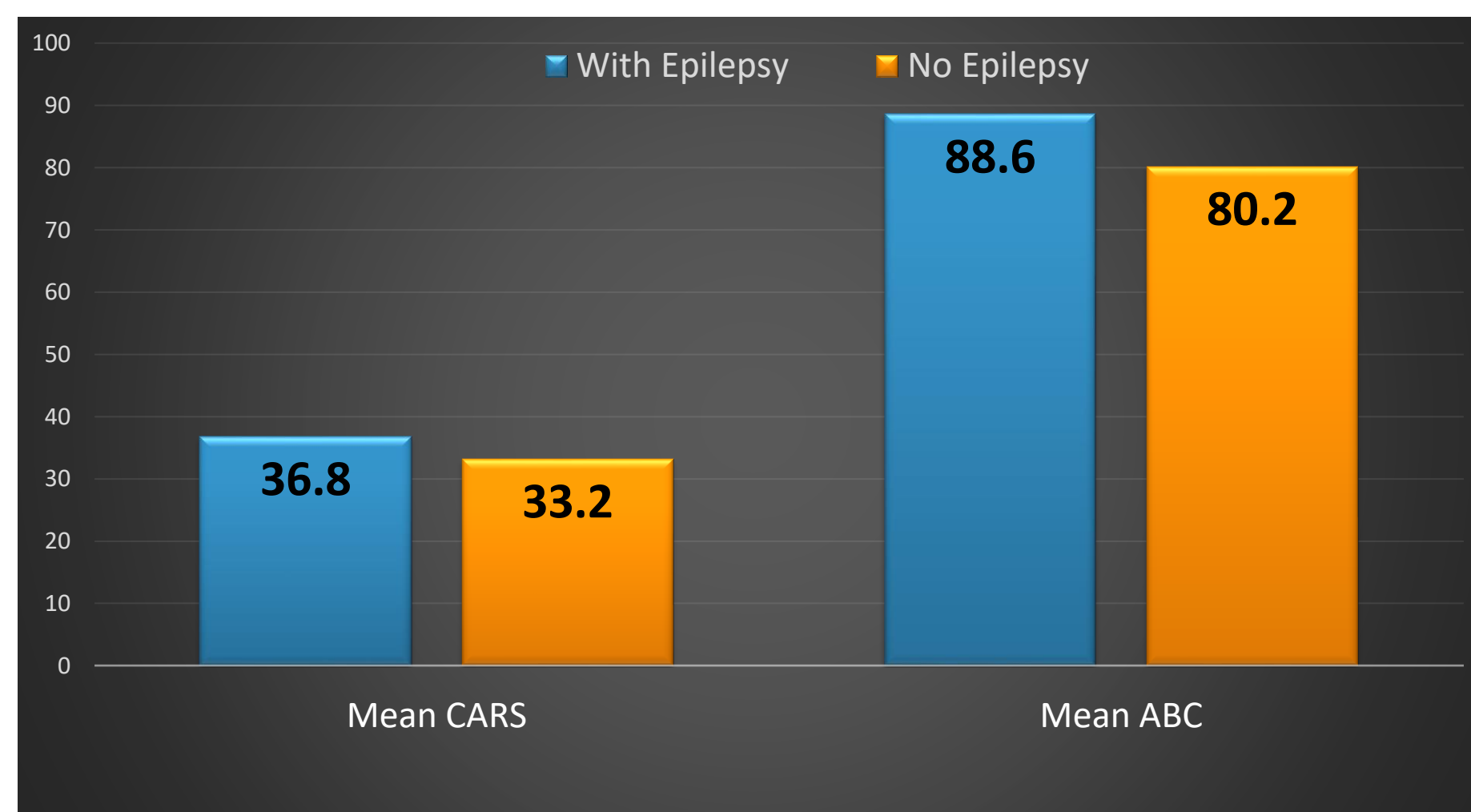


INTRODUCTION

- Autism Spectrum Disorders and Epilepsy frequently overlap with each other posing a significant challenge in terms of diagnosis and management
- It is necessary to recognize this intricate connection between the two conditions for developing tailored treatment strategies

OBJECTIVES

- To understand the prevalence of Epilepsy in Autistic children and its correlation with diagnostic and severity assessment scores in Autism



METHODS

- We did a retrospective analysis of data of Autistic children attending the OPD and Autism clinic of a tertiary care institute in North India
- In addition, we did a scoping review of existing literature in Pubmed and Google scholar in the last decade (2013 to 2023) to compare it with our cohort
- We excluded animal studies, irrelevant title/ abstract, inaccessible and duplicate studies

RESULTS

- The retrospective data of 2289 children with ASD enrolled in our center were analyzed for evidence of clinical Epilepsy, EEG abnormalities and its correlation to Autism severity scores
- We simultaneously did a scoping review in which 527 articles were screened of which 75 were found to be appropriate
- The prevalence of epilepsy was found to be 12% in our cohort**, which is comparable with the available literature evidence of a pooled prevalence of epilepsy of 7% (95% CI: 4–11) in autistic children and 19% (95% CI: 14–24) in autistic adults (1)
- Autistic children with Epilepsy had a **higher mean CARS score** (36.8 ± 2.4 vs 33.2 ± 1.7 , $p=0.03$) as compared to those without Epilepsy and a **higher mean ABC score** of (88.6 ± 10.3 vs 80.2 ± 8.7 ; $p=0.04$) with prevalence of Attention deficit Hyperactivity at 76% vs 34% ; $p=0.02$
- Even in the absence of clinical seizures, EEG abnormalities in Autism can range from 3% to 75% (Spence et al, 2009), 61% (Chez et al, 2006) and can range between 4 and 86% (Precenzano et al : Medicina 2020) (2), (3)

CONCLUSION

- Epilepsy is a common comorbidity in Autism. **Epilepsy prevalence is significantly higher in ASD and vice versa as compared to general population**
- Although EEG is not routinely used in all children with ASD, certain clues like regression, dysmorphology, staring spells & family history should prompt additional evaluation
- In our cohort, 12% of autistic children have Epilepsy**
- Our findings align with existing literature that **Intellectual disability is a major risk factor for epilepsy in ASD**
- Mere presence of an abnormal epileptiform EEG is not in itself an indication for ASM in ASD because these EEG abnormalities are probably most often simply a marker of the underlying brain disorder responsible for the autism
- This underscores the need for comprehensive care to improve quality of life in children with Autism

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CONTACT

Prof Sheffali Gulati, MD, FRCPC (UK), FAMS, FIAP, FIMSA

www.pedneuroaiims.org , sheffaligulati1@gmail.com

twitter: @GulatiSheffali; Skype: sheffaligulati_1

