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Autistic Regression: Should it Prompt Urgent EEG?

Autistic spectrum disorders (ASD) are being increasingly recognized in children. The exact cause of this condition is not clear and the work up is usually negative, thereby causing frustration in parents and treating physicians equally [1]. Treatment usually consists of speech therapy, occupational therapy and behavior modification. As it is usually a permanent condition, any intervention that changes the course of the disease is of immense importance. There is little role for pharmacotherapy except use of drugs like risperidone and stimulants [1].

There are broadly two groups in ASDs; one where children have features of autism since birth and in the other group (about one-third) babies are normal for the initial 9-18 months with some even using some meaningful words and having good interaction to later on lose language milestones and become socially withdrawn. The latter group is referred to as autistic regression [2]. An immune-mediated pathophysiology has been proposed, which is supported by indirect evidence of increased prevalence of autoimmune disorders in families of children with autistic regression as compared to healthy controls [1-3]. This subgroup of ASD when investigated early in the course of the disease sometimes shows epileptic abnormalities on EEG in the form of recurrent generalized spikes and sharp waves in the absence of clinical seizures. Use of antiepileptic drugs and immunomodulation in the form of pulse methylprednisolone followed by oral steroids or intravenous immunoglobulin may theoretically reverse the epileptiform EEG, thereby resulting in complete or partial reversal of autistic regression. The role of EEG in ASDs is not very clear in the literature, though children with ASDs have higher prevalence of epileptiform abnormalities on EEG [4]. Guidelines recommend EEG in children with ASD when they have clinical seizures.

We recently saw two toddlers who presented to us with reduced interaction, decreased response to being called, hand stereotypies and loss of use of few word they had attained. They did not have any clinical seizures. EEG showed recurrent generalized epileptiform discharges prompting us to give a trial of pulse methylprednisolone followed by oral steroids along with levetiracetam and speech therapy. This intervention resulted in improved eye contact, improved comprehension of oral commands and reduction in hand stereotypies within a month. The EEG also showed normalization. These two cases underscore the need to sensitize pediatricians to identity these children early in the regression phase. We feel that a prompt EEG and consideration of immunomodulation along with other intervention, can go a long way in changing the developmental trajectory of these children. Prospective studies with clear protocols are required to confirm this finding. This condition is different from the well-described Landau Kleffner syndrome, which is seen in slightly older age group and the EEG findings there are slightly different [5].

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