

Autism treatment challenges: need for accelerated Research in Pharmacological Interventions

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Autism spectrum disorders (ASD) are a group of developmental disorders characterized by severe abnormalities in communications, social awareness and skills, along with presence of restrictive activities [1]. In addition, there is evidence of involvement of various genetic and environmental factors. There is a growing awareness of the condition, diagnostic substitution and emerging research explains the rise in incidence of ASD. Despite existence of best practice guidelines for ASD diagnosis, which are recognised internationally [2], there is inconsistency in the reporting by the professionals [3]. However, experts believe that the actual rate of incidence could be higher, and only limited number of cases are identified by available definitive diagnosis [4,5]. Further, heterogeneity of ASD poses significant challenge in identifying specific biomarkers [1].

In ASD, medications often target problems such as irritability, aggression, self-injury, hyperactivity, and inattention, rather than the core symptoms of the disorder [6,7]. Core symptoms can be defined as withdrawal from the social domain and typical restricted/repetitive symptoms in the behavior domain [6]. Though, several studies on treatment of ASD have been evaluated, there are considerable variables in the results reported leading to the lack of consistent findings [8]. These variables are seen in certain aspects of research methodology used (such as lack of control, heterogeneous samples, and imprecise measurement), type of clinical practice, and differences in social settings of the studies [9]. Moreover, the efficacy and tolerability of these medications in children with ASD is less favorable than data available in typically developing children with similar symptoms [7,8].

It is acknowledged that there are studies which describe the research in different aspects of therapeutic findings. However, lack of a valid and reliable clinical trial can be a big hindrance to translation of the research for autism. Medications which are not effective should probably be abandoned as potential treatments and those that are effective possibly should be considered for more research [6]. Escalating research in pharmacological interventions and understanding of pathogenic pathways can help in development of new and novel medications for treatment of core symptoms in ASD.

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