Child and Adolescent Psychiatry

EPP370

Characteristics of Children and Adolescents with High Functioning Autism and Optimal Outcome

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Introduction: In general, Autism spectrum disorders (ASDs) are considered lifelong disorders but recent data suggests that after treatment, symptomatic improvement and even loss of diagnosis can be achieved in some cases. Although there is not yet a consensus, the term 'optimal outcome' is generally used for this group of children. Literature on optimal outcome contributes in evaluating treatment efficacy and in identifying factors influencing good prognosis.
Objectives: The aim of this study is to describe a group of children who achieved optimal outcome and compare sociodemographic and clinical features with the cases still being followed up with the diagnosis of High Functioning Autism (HFA).
Methods: This study consists of 60 cases aged 4-18 years who were diagnosed with Autism Spectrum Disorder according to DSM-IV (before 2013) or DSM-5 criteria by clinicians in Dokuz Eylul University Faculty of Medinice Hospital Child and Adolescent Psychiatry Department Outpatient Clinic and during follow-up considered optimal outcome and cases who still meet the diagnosis of High Functioning Autism. The necessary data were collected through retrospective examination of the medical records and during clinical interviews. Comorbid psychopathologies were assessed with the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) semi-structured interview. Childhood Autism Rating Scale (CARS) were applied to evaluate the severity of the symptoms. Intelligence and developmental test results were recorded if available in the medical records for cognitive assessment.
Results: The optimal outcome (OO) group was diagnosed and started special education at a significantly earlier age than the HFA group (p=0.001). The duration of pre-school education was also significantly higher in the optimal outcome group (p=0,023). Symptom severity assessed by CARS at both the time of diagnosis and the current situation was significantly lower in the optimal outcome group (p<0.001, p<0.001). There was no significant difference between the two groups in terms of early verbalization skills and WISC-R scores.
Conclusions: In our study we defined a group of children who lost their diagnosis of autism after special education. Early diagnosis and initiation of special education and less severe ASD symptoms at the time of diagnosis were found to be important factors contributing to optimal outcome.

Disclosure of Interest: None Declared

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Biomarkers of oxidative stress and inflammation in urine samples of extremely preterm newborns and risk for autism at corrected-age 24 months

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Introduction: Extremely preterm birth (defined as birth before 28 weeks' gestational age) has been associated with an increased risk of developing autism spectrum disorder (ASD) in infancy. The underlying pathophysiological mechanisms driving the emergence of ASD in these children remain unknown, although growing evidence suggests that oxidative stress and inflammation play important roles.
Objectives: To detect if urinary protein oxidation could serve as a non-invasive early predictor of ASD risk in extremely preterm newborns.
Methods: In two Spanish cohorts recruited between 2020 and 2022, consisting of 76 extremely preterm newborns, we collected urine samples from birth up to the first week of life (T1 = birth, T2 = 24–72 hours, T3 = day 7) and analyzed biomarkers of oxidative stress and inflammation. We assessed the risk for ASD at a corrected age of 24 months. Using liquid chromatography-mass spectrometry, we measured levels of lipid peroxidation, DNA and protein oxidation metabolites, along with markers of inflammation. We investigated the association between longitudinal urine marker levels and the primary outcome (risk for ASD, defined as an MCHAT-R/F score ≥ 2 at 24 months).
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Results: Thirty-two of the 76 patients completed the 24-month follow-up period and had samples available from at least two of the three time points. Compared to those with no risk for ASD (n = 21), patients at risk for ASD (n = 11) exhibited significantly lower O-tyrosine levels at birth (d = 1.296, p = .048). Moreover, O-tyrosine levels increased significantly over time in at-risk patients relative to non-ASD risk patients from birth to day 7 (p = .032), suggesting protein damage due to significant oxidative stress.
Conclusions: These findings indicate that urinary protein oxidation markers could serve as promising, non-invasive early predictors of ASD risk in extremely preterm newborns.

Disclosure of Interest: None Declared