STREPTOCOCCAL INFECTIONS AND EXACERBATIONS IN CHILDREN WITH PANDAS SYNDROME, THEIR REVIEW AND META-ANALYSIS

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Abstract: *In recent years, an assumption has been made about the connection of various choreiformhyperkinesis, tics, myoclonus, and neurosis-like obsessive states in children with β-hemolytic streptococcus group A (BHSA). Currently, early diagnosis of a number of autoimmune diseases, including those caused by β-hemolytic streptococcus group A and the development of differential diagnostic criteria for PANDAS syndrome, as well as the choice of treatment tactics and the prevention of complications in this pathology, is very relevant.*

PANDAS syndrome, in contrast to minor chorea, is characterized by local, easily stopped tics, with debut disease from 5 years to 12 years. The developed differential diagnostic criteria and the algorithm for the diagnosis of PANDAS syndrome will allow timely diagnosis and application of the necessary treatment tactics. Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal infection (PANDAS syndrome)), suggests a link between group A beta-hemolytic streptococcus infections (BGSA).

Key words: *PANDAS syndrome, children, streptococcal infection, review.*

Objective: To study the subsequent occurrence or exacerbation of neuropsychiatric symptoms, such as obsessive-compulsive disorder (OCD) or tic disorder.

Research methods: Conducted a meta-analysis and a systematic review, including prospective studies of exacerbations of neuropsychiatric symptoms associated with BGSGA infections in children with PANDAS syndrome. We conducted a study at the Medicas Clinic and before March 7, 2021 and we used patient analysis data.

The results obtained: The review included 3 studies with 41 cases with PANDAS and 64 control group children with OCD or chronic tic disorder. PANDAS cases had a slightly increased HR of 2.33 [95% confidence interval [CI]: 0.63-8.70, p=0.21, I2= 28.3%] for exacerbations of neuropsychiatric symptoms in conditions of temporary proximity to BGSGA infections and the absence of an increased risk of BGSGA. Infections (HR = 0.99 95% CI: 0.56-1.73 P=0.97 I2= 45%) compared with children of the control group. However, PANDAS cases had an increased risk of neuropsychiatric disease exacerbations in general with an HR of 1.54 (95% CI: 1.12 - 2.11 P = 0.008, I2= = 0%) compared with children of the control group.

Conclusions: The results did not show reliable evidence of higher temporarily associated BGSGA infections and exacerbations of neuropsychiatric symptoms in children with PANDAS. The included studies were small and limited to low rates of BGGS and exacerbations. Future studies with large population sizes and routine assessments are needed to thoroughly examine the PANDAS hypothesis.

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