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Toxoplasmosis sero-positivity in children with autism

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Background: *Toxoplasma gondii* is a mandatory intracellular protozoa that many people worldwide are infected with. In children, the infection enters central nervous system and leads to inflammation of the gray matter. Autism is a complex developmental disorder, altering social communication, with unknown origin. Neuropathological changes in autism are the same as those occurred in brain toxoplasmosis. The objective of this survey was to evaluate positive serology of *Toxoplasma gondii*, in autistic children.

Methods: This case-control study was done on 3-12 years old children, referring to the neurology and psychiatry clinics of Baqiyatallah hospital and also autistic children of Omid-e Asr and Navid-e Asr general rehabilitation centers in Tehran, Iran. The study performed at 2012-2013. Forty autistic children were placed in the case group and 40 children, suffering from no neuropsychiatric disease or other ones, were placed in the control group. Sampling was done with 5 ml blood, for determining IgM and IgG antibody levels against *Toxoplasma gondii*, using ELISA method. Data analyzed by the software SPSS ver. 17.

Results: The autistic group contained 34 boys and 6 girls (85 and 15 percent respectively), with the average age of 6 (± 2.71) years old [minimum of 2.33 and maximum of 12]. The average age at the time of diagnosis was 4.01 (± 1.87) years old. 87. The no autism group contained 17 boys and 23 girls (42.5 and 57.5 percent respectively), with the average age of 5.67 (± 3.09) years old [minimum of two and maximum of 12]. IgM and IgG serology of all autistic children were negative, while in non-autistic group, 2.5 percent (1 child) were positive and 97.5 percent (39 ones) were negative. There was no statistically significant difference among these two groups according to the serology results. ($P=0.31$).

Conclusion: There was no statistically significant difference in comparing positive serology of toxoplasmosis, between the two groups. However, to obtain a perfect result, larger sample size is required.

Biography

Shahla Afsharpaiman has completed her specialist in Pediatrics and subspecialist in Infectious Disease from Tehran University of Medical sciences. She works in pediatric ward of Baqiyatallah Hospital and Research center. She has published more than 15 articles in Iran and other countries Journals.

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