Journal of Shahid Sadoughi University of Medical Sciences
Vol 28| NO 1 | Apr 2020

Received: 3 May 2019
Accepted: 23 Jul 2019

Serum Level of Anti-*Toxoplasma Gondii* IgG among the Individuals with/without Migraine

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Original Article

Introduction: More than 500 million people throughout the world are infected with *Toxoplasma gondii*. On the other hand, migraine is known as the most common pain syndrome. The aim of this study was to detect anti-*Toxoplasma gondii* IgG in the serum of individuals with and without migraine.

Methods: In this descriptive-analytical study, 50 person (7 male & 43 female, in the age range of 20-60 years) with history and symptoms of migraine (case group), and 50 individuals (7 male & 43 female, in the age range of 20-60 years) without migraine (control group) were selected randomly. Blood samples (5 ml) were collected from all the selected people, and the serum level of anti-*Toxoplasma gondii* IgG were determined using Enzyme-Linked Immunosorbent Assay (ELISA) technique. In this test, 10 IU/ml of anti-Toxoplasma gondii IgG was considered as the minimum titer. For statistical analysis SPSS Inc, Chicago, IL; Version 18 software and -Chi-square and t-tests were used.

Results: 38% of the patients with migraine and 32% of the control group had anti-*Toxoplasma gondii* IgG above 10 IU/ml. The mean amount of anti-T. gondii IgG in the serums of case group was 173.42 IU/ml, while it was 68.25 IU/ml in the control group, the mean amount of Toxo-IgG in migraine positive group was 2.5 time higher than the amount in the control group ($p<0.05$).

Conclusion: According to the results of this study it is concluded that the serum level of anti-Toxoplasma gondii IgG in migraine positive persons is significantly higher than the migraine negative individuals. Therefore, it is recommended that the patients disordered with migraine be tested for chronic toxoplasmosis.

Keywords: Antibody IgG, *Toxoplasma gondii*, Chronic toxoplasmosis, Migraine, ELISA.

Citation: Jouyani N, Ahady MT, Abbasi V. **Serum Level of Anti-*Toxoplasma Gondii* IgG among the Individuals with/without Migraine.** J Shahid Sadoughi Uni Med Sci 2020; 28(1): 2315-23.

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