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Is there relationship between *Toxoplasma gondii* IgG seropositivity and idiopathic Parkinsonism and does it have correlation with cortisol blood level?

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Background: Some researches linked between latent Toxoplasmosis and neurological diseases, now the main interest is the probable relation between toxoplasmosis and neurological diseases as epilepsy and Parkinsonism.

Aim: To detect the incidence of *Toxoplasma gondii* infection in patients idiopathic Parkinsonism and correlate it to their blood level of cortisol.

Materials and Methods: This study was conducted on 30 idiopathic Parkinson's Patients, 30 psychiatric Patients, 30 apparently healthy individuals. All subjects were submitted to a questionnaire, detection of anti-*Toxoplasma* IgM, anti-*Toxoplasma* IgG and cortisol level by ELISA.

Results: Out of the 90 cases; 41.11% and 1.11% were positive for anti-*Toxoplasma* IgM and IgG, respectively. The percentage of positive anti-*Toxoplasma* IgG cases was in healthy group (46.67 %) followed by Parkinsonism group

(43.3%). Mean cortisol level higher in Parkinson's group than other groups but still within normal levels. Contact to cats, drinking unfiltered water and consuming unwashed raw vegetables was significantly higher in *Toxoplasma* IgG seropositive Parkinson's patients. Highest anti-*Toxoplasma* IgG positive cases in Parkinson's group were detected in stage 3 of the disease.

Conclusion: A high *Toxoplasma* seropositivity in association with Parkinsonism. *Toxoplasma gondii* oocyst may be the most probable main mode of transmission of *Toxoplasma gondii* in idiopathic Parkinson's patients. *Toxoplasma gondii* may worsen idiopathic Parkinsonism. Cortisol level was higher in Parkinson's patients; still it showed no significant relationship with *Toxoplasma gondii* seropositivity.

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