A Novel Scientific Finding: Relationship between Food-Borne Toxoplasmosis and Car Accident

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S cientists have recently revealed that there might be a relationship between driving accident’s problems, especially in the elder people with one of the important food-borne diseases named toxoplasmosis which is caused by Toxoplasma gondii (1, 2).

This food-borne disease is highly prevalent, worldwide. In Iran, the prevalence of this disease was reported to be 30-40 percent among the general population. Based on the life cycle of this parasite, its frequency is higher in warm regions compared with cold areas. For example, in Isfahan the parasite has a prevalence of 43 percent; whereas, in Ardabil the prevalence is about 18 percent. Moreover, the prevalence of toxoplasmosis is low in desert and semi-desert areas such as Zahedan and Yazd. It is reported that more than half of the people living in Tehran city are infected with Toxoplasma gondii, (3).

The infection symptoms occur in only 15 percent of the infected people, including sore throats, headaches, submental swollen lymph nodes, myalgia, and fever. In the immunocompetent individuals, the symptoms usually reduce after a few days (4), however, the tissue cyst will remain in their brain, eyes, and muscular tissues. Recent studies indicated that the presence of the tissue cyst disrupt the neurotransmission in the brain followed by neurological diseases. In addition, patients with chronic diseases have increased amounts of dopamine that results in behavior change and slow reactions which might cause the traffic road accidents when driving (5, 6).

Toxoplasma gondii parasite infects human beings in several ways, including consumption of unwashed fruits and vegetables, cooked or semi-cooked meat and liver. Another important way for transition of this parasite is drinking goat milk (7). The infection rate of goat milk in Iran is around 10 percent (3). Other infection routes include contacting with stray cats, whole
blood transfusion, and transition from placenta to infect fetus. The best medications are pyrimethamine and sulfadiazine for 3 to 4 weeks in general population and spiramycin in pregnant women (8).

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References


