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Prevalence of toxoplasmosis among selected group of unmarried volunteers Sudanese females

Abstract

Background: toxoplasmosis is a disease that results from infection with the Toxoplasma gondii parasite, one of the world's most common parasites1. T. gondii has an environmental stage oocysts are shed in cat feces, sporulate, and disperse in the environment, where intermediate hosts get infected. Oocysts are an important source of infection for both animals and human.

Objectives: The purpose of this study was to determine the prevalence of toxoplasmosis among selected group of unmarried Sudanese females.

Materials and methods: A total of 45 unmarried volunteers females diagnosed serologically by latex agglutination method at parasitology laboratory, Faculty of Medical laboratory, Elrazi University, Sudan.

Result: From a total of 45 unmarried volunteers' females diagnosed serologically by latex agglutination test, 33.3 % were seropositive and 67.7 were seronegative.

Keywords: toxoplasmosis, unmarried, females, total, method, parasitet

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Introduction

Toxoplasmosis is a disease that results from infection with the Toxoplasma gondii parasite, one of the world's most common parasites.[1] It's an important cause of reproductive failure in man and farm animals resulting in significant socio-economic losses worldwide.[2] Toxoplasmosis as other parasitic infections are dynamic in their distribution–some are endemic while many ubiquitous. The environment plays a key role in their survival and transmission often time.[3] A toxoplasma infection occur by eating undercooked, contaminated meat (especially pork, lamb, and venison), accidental ingestion of undercooked ,contaminated meat after handling it and not washing hands thoroughly (Toxoplasma cannot be absorbed through intact skin) ,eating food that was contaminated knives , utensils ,cutting boards and other food that have had contact with raw, contaminated meat, drinking water contaminated with toxoplasma gondii, accidentally swallowing the parasite through contact with cat feces that contain toxoplasma gondii, mother–to-child (congenital) transmission, receiving an infected organ transplant or infected blood via transfusion,4 it can be also sexually transmitted infection with serious clinical consequence. In most cases toxoplasmosis does not cause any symptoms and the person is not aware they are infected but in 10-20% of people infected with toxoplasmosis will develop symptoms similar to flu or glandular fever such as, high temperature (fever) of 38°C OR overaching muscle, tiredness feeling sick, sore throat, swollen glands, these symptoms are usually mild and will normally pass within a few weeks. Toxoplasmosis can be serious if a women becomes infected while she is pregnant or few weeks before conceiving. This is because there is a chance the infection could be passed to her baby and if the infection spreads to her baby, it can cause, miscarriage, stillbirth and congenital toxoplasmosis ,that cause serious problems that either noticeable from birth or develop several months or years later, such as brain damage, hearing loss and vision problems. Toxoplasmosis is present in every country and seropositivity rates range from less 10% to 90%. The causative agent, Toxoplasma gondii, has a complex life cycle and is an important food borne pathogen. Human infection can result from the ingestion or handling of undercooked or raw meat containing tissue cyst (bradyzoite). Alternatively, it can result from direct contact with cats or from the consumption of water or food contaminated by oocysts excreted in the faeces of infected cats.[5]

A study done by Daryani A[6] showed that the overall seroprevalence rate of toxoplasmosis is among general population in Iran was 39.3%.[6] A study done by Nebiye, et al showed that of 684 women, the prevalence of toxoplasmosis was determined to be 58.3%, .employment as seasonal farm worker, increasing age and having had three or more pregnancies were found to be the crucial associated risk factors that affect the prevalence of T.gondii infection.[7] Across sectional study done by H. Jahani and M.saraei showed that the seroprevalence of T.gondii among 400 unmarried women was 34%.[8] A study done by Mohamed[8] showed that the seroprevalence rate of toxoplasmosis among 1146 serum samples was 43.6%.[9]

Although most immuno competent individuals infected with toxoplasmosis remain asymptomatic throughout life, worldwide this parasite cause a large amount +of visual loss and morbidity, in addition to fatal infections in immunocompromised patients. Hygienic measures are cost-effective and can reduce the chance of transmission.[10]

Objectives

The purpose of this study was to determine the prevalence of toxoplasmosis among selected group of unmarried Sudanese females

Materials and methods

Study population: A total of 45 unmarried Sudanese females from Khartoum state.

Collection criteria: Inclusion criteria: unmarried, Sudanese and female.

Exclusion criteria: married, not Sudanese and male.

Data collection: Data were collected from 45 unmarried Sudanese females from Khartoum state by parasitology staff at Elrazi University, Sudan.

Sample collection: 5 ml of venous blood were collected from each high lifestyle female in plain container and then serum was separated from each specimen.

Latex agglutination test: Was used to screen the sera.

Data analysis: Data of this study was analyzed by dividing the number of positive specimens to the whole specimens and then multiplies to 100 (percentage %), (Number of positive specimens/all specimens) X100.

Ethical consideration: This study was approved by the faculty of medical laboratory sciences, Elrazi University, and informed consent was obtained from each participant before sample collection.

Result & discussions

Toxoplasmosis is one of the most important diseases, which is more commonly diagnosed serologically. When we compare our study result with the results of previous studies we observed that our results 33.3% is nearly to that detected by H. Jahani and M.saraei among unmarried females which is 34% (Table 1).

Table 1 It shows the Toxoplasmosis is one of the most important diseases

Result	Number	Percentage %
Positive	15	33.30%
Negative	30	67.70%
Total	45	100%

Conclusion

In summary we conclude that further studies should be done with large sample size and including married Sudanese females in order to make a comparison between the two groups.

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Conflicts of interest

The author declares there are no conflicts of interest.

References

1. www.mayoclinic.org/di
2. www.globalscienceresearchjournal.org
3. Mosab Nouraldein Mohammed. The effect of home ground in the prevalence of toxoplasmosis among group of seropositive Sudanese females, Khartoum. *European Academic Research*. 2016;3(12):1–9.
4. *Toxoplasmosis Frequently Asked Questions*. 2017.
5. *Toxoplasmosis*. 2018.
6. Paul R Torgerson, Pierpaolo Mastroiacovo. The global burden of congenital toxoplasmosis: a systematic review. *Bulletin of the World Health Organization*. 2013;91:501–508.
7. Mohamed Murtuza Kauser, Asfia Afreen, Prabhakar K, et al. Study of Serum Magnesium in Type 2 Diabetes Mellitus and its Correlation With the Modality of Treatment- A South Indian Study. *Global journals*. 2014;14(4-k):320–352.
8. Jahani H, Saraei M. Seroprevalence of Toxoplasma gondii in unmarried women in Qazvin, Islamic Republic of Iran. *East Mediterr Health J*. 2010;16(1):24–28.
9. Halil Mohamed, Aziz A Ahmed, Intisar E Elrayah. Prevalence and risk factors for Toxoplasma gondii infection in humans from Khartoum State, Sudan. *International journal of public health and epidemiology*. 2013;2(3):60–66.
10. Furtado JM, Smith JR, Belfort R Jr, et al. Toxoplasmosis: a global threat. *J Glob Infect Dis*. 2011;3(3):281–284.

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