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Alleyassian F. and Moatari A(1990) : the prevalence of toxoplasma gondii Remington JS antibody in pregnant women in Shiraz . *R.J.Med.Sc* , 15:13-17

Armenia J.J. Stephan C., Subey J.P. , Engelstoff C , Schwantje H and Ribble CS.(1999): Potential contamination of drinking water with toxoplasma gondii oocysts. *Epidemiol Infect* , 122:305-315.

Assmar M,Amirkhani A. Piazak N. Hovanesian A, Kooloobandi A and Etessami R . (1997): Toxoplasmosis in Iran. Results of a seroepidemiological study.*Bull Soc Pathol .Exot.* 1997;90 (1):19-21. French.

Athari DV.(1973): Seroprevalence of toxoplasma antibodies among pregnant women in Kermanshah.*Med J Islamic Rep*, 25: 93-96 .

Boch J., Kuhn D., Rommel M. and Weiland G. (1974): Toxoplasma infections in domestic animals and their importance for toxoplasmosis in humans (author's transl). *MMW Munch Med Wochenschr* .23; 116(34): 1477-80.

Couvreur J. and Desmonts G.(1998): Toxoplasmosis in : Macleod c I parasitic infections in

- Pregnancy and Newborn : Oxford Univ Press;
- Cunningham FG , Mac Donald PC, Gant NF (1997) : Williams obstetrics .20 th ed. Stamford , Appleton & Lange, pp 1309-1310.
- romingny JA, Pecarrere JL , Leroy F Ollivier G, Boisier P(1996) : Prevalence of toxoplasmosis in Tananariye. Study Conducted of the Pasteur Institute of Madagascar on a sample of 2354 subjects. Bull.Soc.Pathol. Exot ; 89(3):212-6
- Dubey JPA(1990): Review of toxoplasmosis in pigs.Vet Parasitol ; 19 : 181-223
 - Ghorbani M, Edrissian GH, Afshar A.(1978):Serological survey of toxoplasmosis in the northern part of Iran, using indirect fluorescent antibody technique. Trans R Soc Trop Med Hyg ;72(4):369-71.
 - Ghorbani M, Hafizi A , Shegerfcar MT Rezaian M , Nadim A , Anwar M, Afshar A.(1983). Animal toxoplasmosis in Iran . J Trop Med Hyg. Apr;86(2):73-6.
 - Ghorbani M,Samii AH.(1973) .Toxoplasmic lymphadenitis in Iran. J Trop Med Hyg. Jul;76(7):158-60.
 - Ghorbani M , Edrissian GH , Afshar A.(1981). Serological survey of human toxoplasmosis in mountainous of the north-west and south-west part of iran .Trans R Soc Trop Med Hyg ;75:380-387.
 - Jones JL,Ogunmodede F,Scheftel J,Kirkland E,Lopez A,Schulkin J, Lynfield R .(2003): Toxoplasmosis-related knowledge and practices among pregnant women in the United States. Infect Dis Obstet Gynecol;11(3):139-45.
- Zentralbl-Gynakol(1999): oxoplasmosis-antibody seroprevalence in Mecklenburg-Western Pomerania, 121 (5):234-43.
- Joynson DH .(1992) Epidemiology of toxoplasmosis in the U.K. Scand . J . Infect . Dis.Suppl ; 84:65-9
 - Leonor Chacin B,Yulaicy Sanchez Ch , Francisca Monsalve J.(2001): Seroepidemiology of Toxoplasmosis in Amerindians from Western . A.J.Trop.Med.Hyg.65(2);131-135.
 - Mccobe RE ,Remington JS (1990) : Tropical and geographical Medicine .2 end Mcgrow Hill ; 309-320
 - Oksanen A, Tryland M, Johnsen K, Dubey JP.(1998): Serosurvey of Toxoplasma gondii in North Atlantic marine mammals by the use of agglutination test employing whole tachyzoites and dithiothreitol. Comp Immunol Microbiol Infect Dis; Apr;21(2):107-14
 - Peter G .(1997): Toxoplasma gondii infection in red book report of the committee on unfectious disease .14th ed ; 531-35.
 - Remington JS ,McLeod R ,Desmonts G.(1995): Toxoplasmosis .Remington–Kelin infectious disease of fetus and newborn infant .4thed .Saunders; 140-267.
 - Ruiz A, Frenkel JK.(1980): Intermediate and transport hosts of Toxoplasma gondii in Costa Rica. Am J Trop Med Hyg;29(6):1161-6.
 - Schenone H, Salinas P , Contreras MC, Sandoval L , Rojas A.(1990): Epidemiology of toxoplasmosis in Chile . Prevalence of human infection in restigated by means of an indirect hemagglutination test in regimes .Bol.Chil. parasitol.1990; 15 (1-2) :19-22.
 - Sever J ,Loewer-Sieger D , Hoeroever – Bonnet H.(1986): Toxoplasmosis maternal and pediatric findings in 2300 pregnancies . Pediatrics: 82(2): 181-92

SEROEPIDEMIOLOGICAL STUDY ON TOXOPLASMA INFECTION AMONG HIGH-SCHOOL GIRLS BY IFAT

IN ESFAHAN CITY, IRAN

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The purpose of this study was determination of the positive and ascending serological titer of *Toxoplasma* in high-school girls and effectiveness of some relevant factors.

This descriptive-analytic survey was performed with 414 sera collected from High – School girls of six regions in Esfahan city by cluster random sampling method. The specimens were taken from the tip of the finger by *haematocrite microtubes*. The samples were studied by *Indirect Immunofluorescent Assay Test (IFAT) for the estimation of serological titers*. Data were analyzed by two statistical methods: as χ^2 and t test.

In this study, the overall sero – positive rate was 18.4% in 14-19 years old girls. There was an increase in positivity with increasing the age. IFAT titer of 98% of the positive samples was 1:100 and remaining 2% were more than 1:100 to which were performed another titration test to retrieve exact titer. Possible effective risk factors were as follows: Age, region of living, educational factor (parents and student), consumption of undercooked meat and raw liver, occupation and their parents income, exposure to contaminated sources such as cats and poultries. The most positive titre group was in the region number One with prevalence of 27.5% and the least one was in the region number Two with prevalence of 14.5%. Significant differences were found in seropositivity and the exposure with cat and also keeping poultry in the house ($P > 0/05$). No significant difference was demonstrated in the seropositivity and the other factors. There was a low level of knowledge about toxoplasma and toxoplasmosis and relevant factors, Only 2.4% of the girls were relatively aware regarding to the matter. There was not any acute case.

Toxoplasma infection is very important because of its socioeconomic aspects, therefore control measurements must be performed. All seronegative women should be aware about this infection and its transmission routes. Education is the most important way to prevention and must be progressed via the mass media, training systems and administrations. The study group in this survey were girls in marriage or premarriage ages and it is suggested that managers should continue to offer education about practices that help prevent these kind of diseases as well as information about preventing toxoplasmosis specifically.

Key words: *Serological Titer of Toxoplasma, IFAT, High - School girls*

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