

**2002**

(2002/11/6 2002/8/28 )

(176)

2002

 $(4 \leq 5 - 20 \geq)$ 

.(%32.8)

(24-20)

(%66.3)

.(%41.4) 32

**The Use of Latex Agglutination Test in the Diagnosis of  
Toxoplasmosis Among Women in Child Bearing Age in Nenavah  
Governorate in 2002**

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**ABSTRACT**

This study try to determine the rate of Toxoplasma infection among a sample of (176) women in child bearing age in Nenavah Governorate and comparing this rate with prevalence of Toxoplasmosis in the previous years. So that serological tests were done to detect acute and chronic infection by using Latex agglutination test (LAT) and Modified agglutination test (MAT). The results show that the ages of women sample in this study

ranged between ( $\leq 20 - \geq 45$ ), the age group (20-24) years has the highest rate of infection, also the highest rate of infection was in the titer (32) in a percentage (41.4%). There is no significant difference between percentages of titer for all positive cases.

*Toxoplasma gondii*

.(Remington et al., 2000)

.(Szenasi et al., 1997)

.(Beaman et al., 1992)

(Dubey, 1986)

.(Desmont, 1982) Congenital Toxoplasmosis  
(%95.5)

.(Blood and Radostitis, 1982)

:

:

:

Latex

2002

.Modified Agglutination test

Agglutination test

(4 5  $\leq$  - 20  $\geq$ )

(176)

.(2002)

(10)

/

(3000)

LAT

.Toxocell-latex

Biokit.SA

Kit

.....

2-Mercaptoethanol (2-ME)

(0.2) 2-ME

IgM

3 (0.2) MAT

(2-ME) 3 (0.2) LAT

°(37)

(4 5 ≤ - 20 ≥)

(176)

(%32.8)

(24-20)

(%66.3)

(45 ≥)

(%25.1)

(29-25)

(1)

(%0.86)

:1

.LAT

(%)			
(8.6)	10	14	20 ≤
(32.8)	38	60	24-20
(25.1)	30	44	29-25
(15.5)	18	27	34-30
(10.3)	12	19	39-35
(6)	7	9	44-40
(0.86)	1	2	45 ≥
(66.3)	116	176	

(2)

(4)

(%41.4)

(48)

(32)

(24-20)

(%3.4)

.8

(45<)

LAT

LAT

36.415 =  $\chi^2$       29.813 =  $\chi^2$

(P=0.05)

:2

%							
		<b>64</b>	<b>32</b>	<b>16</b>	<b>8</b>	<b>4</b>	
(8.6)	10	-	6 (12.5)	2 (4.9)	2 (25)	-	20 ≤
(32.8)	38	5 (33.3)	16 (33.3)	11 (26.8)	4 (50)	2 (50)	24-20
(25.9)	30	6 (40)	10 (20.8)	12 (29.3)	(12.5)1	1 (25)	29-25
(15.5)	18	3 (20)	7 (14.6)	8 (19.5)	-	-	34-30
(10.3)	12	2 (6.7)	4 (8.3)	6 (14.6)	-	1 (25)	39-35
(6.0)	7	-	5 (10.4)	2 (4.9)	-	-	44-40
(0.9)	1	-	-	-	1 (12.5)	-	45 ≥
(100.0)	116	15 (13.0)	48 (41.4)	41 (35.3)	8 (6.9)	4 (3.4)	

(1)

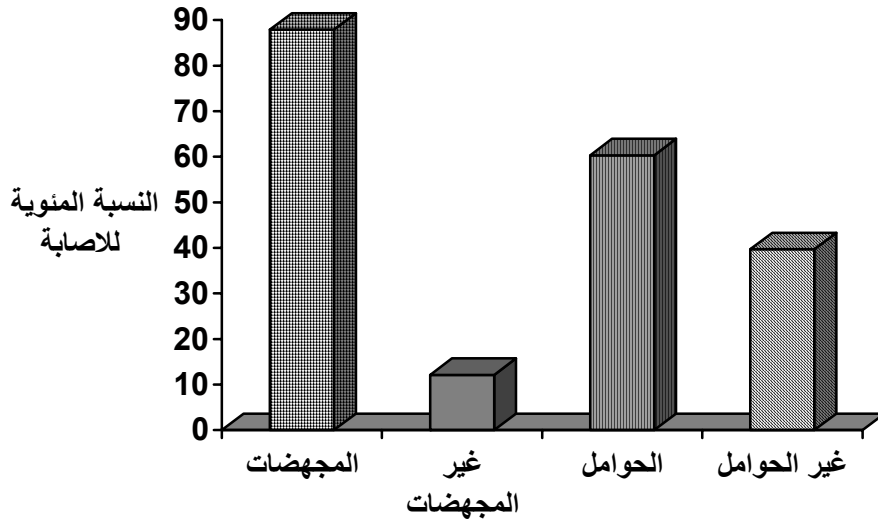
(%87.9)

(160.3)

(116)

(%17.4)

.....



:1

(116)  
 42 MAT IgM (%63.8) (%36.2)

(2000) (176) (%66.3)  
 (150) (%39.33)  
 (510) (69.2) (2001)

.(Remington et al., 2000)

(1)  
 (1992) Niazi (24-20)  
 (%30.8) (25-20)

(32) LAT  
 ≥16 (1975) Ludlam Karim (%41.4) (48)  
 ( ) IgM IgG  
 (1987) Fulton  
 (128) (64)  
 (%87.9)  
 (2001) Abdulla (%60.3)  
 (100) (%56.6)  
 (2000)  
 LAT (%39.53) (%53.70)  
 (1985) Fatohi  
 (%33.07)  
 .(Cohn and Saduno, 1976)  
 (%63.8) 116  
 (2-ME)  
 IgM  
 IgG  
 (1996) Sulzer (1986) Pappas  
 IgM IgG IgM  
 IgM IgG IgM

			IgG
			(Blocking effect)
		IgG	
		(1993)	Welch
			-
(1980)	Ruiz	Frenkle	
		IgG	

.2001

.2000

- Abdulla, B.A., 2001. Toxoplasmosis in high risk pregnancies in Mosul, Iraq Rafidain Journal of Science, Vol.122, pp.1-4.
- Beaman, M., Luft, B. and Remington, J.S., 1992. Prophylaxis for toxoplasmosis in AIDS. Ann, Intern. Med., Vol,117, pp.163-164.
- Blood, D.C. and Radostitis, O.M., 1989. Veterinary Medicine 17<sup>th</sup> ed. Bailliere Tindall, Philadelphia.
- Cohen, S. and Sadun, E., 1976. Immunology of parasitic infection. Black Well Scientific Publications, London, UK. pp. 234-267.
- Desmonts, G., 1982. Acquired toxoplasmosis in pregnant women: evaluation of the frequency of transmission of toxoplasma and Congenital toxoplasmosis. Lyon. Med., Vol.248, pp.115-123.
- Dubey, J.P., 1986. Toxoplasmosis J. Am. Vet. Med. Asso., Vol.1892, pp.166-170.
- Fatohi, F.A., 1985. Detection of toxoplasmosis among different groups of population in Mosul city by using IHAT and CFT. M.Sc. Thesis, College of Medicine, University of Mosul. Iraq.
- Frenkel, J.K. and Riuz, A., 1980. Human toxoplasmosis and cat contact in Casta Rica. Am. J. Trop. Med. Hyg., Vol.29, pp.1167-1180.
- Fulton, J.D., 1987. Studies on agglutination of *Toxoplasma gondii*. Trans. Soc. Trop. Med. Hyg., Vol.59, pp.694-704.
- Karim, K.A. and Ludlam, G.B., 1975. The relationship and significance of antibodies titers as determined by various serological methods in glandular and ocular toxoplasmosis. J. Clin. Pathol., Vol,28, pp.42-49.

- Pappas, M.G., Lunde, M.N. and McMahon, J., 1986. Determination of IgM and IgG antibodies to toxoplasma using IFA test, ELISA and Dot. ELISA procedure. *Vet. Parasitol.*, Vol.20, pp.31-42.
- Remington, J.S., Mcleod, R., Thulliez, P. and Demonts, G., 2000. Toxoplasmosis In: Remington, J. S. and Klein, J. O. "Infections Diseases of the fetus and Newborn Infant". 5<sup>th</sup> ed. W. B. Saunders Company, Philadelphia, pp. 206-346.
- Sulzer, A.J., Franco, E. L. and Walls, K.W., 1996. An oocyst-transmitted outbreak of toxoplasmosis patterns of Immunoglobulin G and M over on year *Am. J. Trop. Hyg.*, Vol.35, pp.290-296.
- Szenasi, Z., Mecseki, R., Lukass, K., Urban, E.; Rakos, K., Ozsvar, Z. and Nagy, E., 1997. Analysis of the serological results of Toxoplasma Screeing of Pregnant women in Szeged with special regard to the year 1995. *Parasite. Hung.*, Vol.30, pp.17-26.
- Viazi, A.D., Nasaif, W.M., Abbas, S. and Gazi, S. F., 1992. Prevalence of toxoplasmosis antibodies in Iraq population. *J. Fac. Med. Bagh.*, Vol.34, pp.255-261.
- Welch, P. H., Masur, H. and Remington, J. S., 1993. Serological diagnosis of acute lymphadenopathic toxoplasmosis. *J. Infec. Dis.*, Vol.142, pp.256-264.