

Study The Causative agent of abortion in Babylon city by using TORCH test.

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ABSTRACT: TORCH syndrome is only one health issue. According to health experts, however, TORCH syndrome is a set of various infectious diseases. They can cause serious problems and can damage a fetus' health.

Aim of study: To detection the causative agent of abortion in Babylon city –Iraq by using TORCH test .

Material and patient : Hundred ninety five women severed from abortion were enrolled in this study .The duration of study continuous from July 2018-to June 2019. ELISA test was used for determination the titter of IgG, IgM form all participat.

Result : The study result was showed positive casesfor IgM, IgG of Toxoplasma (94,84) respectively with percentage (57.3%,54.2%). While negative case was showed (12,22) respectively with percentage (38.7%, 55%) .The study was showed in CMV positive titter case in botheIgM,IgG(65,75) respectively with percentage(69.1%, 60%) .while the negative case was (40,31) respectively with present (40%,44.2%)

In Rubella positive IgM, IgG was register as (19,31) with present (73% ,34%).while negative IgM,IgG was (87,75) respectively with percentage (51%,71%).

Finally the positive result of IgM, IgG HSV was showed (6,31) respectively with percentage (54.5 %&53%) while the negative result is (79,65) respectively with present (43%& 46%).

Conclusion : this study was found, the toxoplasma was the major factor for the abortion more than the viruses ,we need more study to determination of the relationship between the abortion and infection of viruses.

Keywords: TORCH test; abortion; toxoplasma; HSV; CMV; Rubella

1. INTRODUCTION

The amplified of the complications for the mother and fetus throughout or after pregnancy and delivery are frequently caused by a broad variety of pathogenic species mainly in the TORCH group [toxoplasmosis, rubella, cytomegalovirus (CMV) and herpes simplex virus (HSV) Such agents cause asymptomatic or mild infection in the mother with serious fetal consequences [1].

Pets such as dogs, cats, rabbits, rodents, reptiles and birds can all spread diseases to humans. Disease may be spread when touching an infected pet, or by coming into contact with their feces, urine, saliva or food. While disease does not happen very often, and is usually mild, severe disease can occur. Infections that can be spread from animals to humans include: *E. coli*, *Salmonella*, *Campylobacter*, *Giardia*, *Cryptosporidium*, *Yersinia*, *Toxoplasma*, Rabies

People at risk of serious problems from some of these infections include:

Fetuses and infants ,Young children ,The elderly People with weakened immune systems from HIV/AIDS, cancer treatment, steroid therapy or organ or bone marrow transplant. (WHO,2017)

The chronic disease is less than infected of fetus death and abortion the new study was showed that is infectious disease is the major caused of pregnant complication , Infection with these agents can lead to significant morbidity and mortality especially in the development country [2].

Toxoplasma gondii, an intracellular parasite which are transmitted from contaminated water or food and uncooked meat, The incubation retro after the cysts are swallowed is 5–23 days. The infection with this parasite may be without symptomatic and may be lead to loss of pregnancy, fetus abnormalities and death during pregnancy [3]

Infection with rubella virus is increased through tiny droplets in the air from person to person, and from mother to her fetus by the placental transmission, disease lasts 1–5 days, and the time of cultivation from 2–3 weeks [4]. It normally occurs in children and adults with moderate or asymptomatic infection Nevertheless, virus could irritated the placenta and lead to miscarriage [5], Virus can cross the placenta, leading to miscarriage, fetal death or sever complication such as hearing loos [6].

Cytomegalovirus (CMV) is a community virus for all persons and the healthful person with highly immune system commonly was able to protect him from all disease .the CMV may be pass from body fluids, such as saliva, urine, blood, tears, breast milk.

In pregnant women, the transmission caused by direct interaction from young children with contaminated urine or saliva, or through sexual relationships [7]. The incubation period of C.M.V infection from 4 to 12 weeks [8]. Signs may appear on babies with congenital CMV infection involved ,Rash ,Jaundice (appear in eyes and skin)Microcephaly (small head) ,Low birth weight,hepatosplenomegaly (enlarged liver and spleen) (damaged eye retina) [9]. The main deficiencies in the childhood such as blinded and loss of hearing a [10].

Herpes simplex virus (HSV) is the common Sexually Transmitted Virus Disease (STD), its classified as HSV1 which are transmitted in non-sexual meetings during childhood, while the type II of HSV2 is always define as sexually transmitted diseases, and is the highest cause of genital herpes infection [11]. The cultivation times are different from 4 to 21 days. Main genital HSV disease remains asymptomatic in more than 75 percent of cases, Infection with genital herpes throughout pregnancy can be lead to the spontaneous abortion [12]. There for this study was done to evaluation of abortion causative agent by using TORCH test.

2. MATERIALS AND METHODS

Retrospectively study was carried out at the Al-Hikma University college from July 2018 till June 2019 ,depending on the accepted of scientific committee in the department of medical laboratory .involved (195 women) diagnosed with abortion and age between 18 to 45 years in Babylon city –Iraq.

10 ml blood was taken from each patient and teased with ELISA (Biomerieux company – Spain following the company instrument guide line.

3. STATISTICAL ANALYSIS

The SPSS statistical program (Version 12.0 for Windows, 1989–2003; SPSS Inc., Chicago, IL, USA) by using T.test was used for the statistical analysis of the findings.

4. RESULT

All the results was showed in Table 1.

The study was showed the Toxoplasma was showed positive titer IgM (94) with percentage 57% and negative titer was showed 38.7% comparative with IgG Antibodies that showed 54.2% in positive and 55% negative IgG antibodies. result with non-significant different

About the difference between IgM and IgG of CMV the positive IgG ,IgM (65,75) respectively and the negative of IgG & IgM was (40 ,31) respectively .this result was non-significant difference .

The antibodies of Rubella virus for both IgM&IgG positive result was (19,31) and (73%,34 %) and the negative was showed (87,75) and(51%,71%) respectively with non significant difference.

Finally the study was showed non-significant different in HSV, the study registered positive result in IgM&IgG as (6,31),(54.5%,53%) and the negative test was registered and (79,65) (43%,46%). Table 1. Figure 1.

5. DISCUSSION

Our study result was agreed with study in Pakistan and comparable results were found in IgM toxoplasmosis [13].

[14] It was showed that positive serological test of IgG and IgM respectively is highly [15], registered that from 31 sample of IgM, IgG there was 31% is positive.

Table 1. Serop evelence of TORCH IgG,IgM antibodies among women with abortion.

Parameter		Total (n=195)		With abortion (n=106)		P value
		No	%	No	%	
Toxo IgM	Positive	164	94.0%	94	57.3%	0.342
	Negative	31	12.0%	12	38.7%	
Toxo IgG	Positive	155	79.5%	84	54.2%	0.852
	Negative	40	20.5%	22	55.%	
CMV IgM	Positive	94	48.2%	65	69.1 %	0.196
	Negative	101	51.7%	40	40 %	
CMV IgG	Positive	125	64.1%	75	60 %	0.451
	Negative	90	35.9%	31	44.2%	
Rubella IgM	Positive	26	13.3%	19	73 %	0.259
	Negative	169	86.6%	87	51%	
Rubella IgG	Positive	90	46%	31	34 %	0.781
	Negative	105	53.8 %	75	71 %	
HSV IgM	Positive	11	5.6%	6	54.5%	0.192
	Negative	184	94 %	79	43%	
HSV IgG	Positive	55	28%	31	53 %	0.213
	Negative	140	72%	65	46 %	

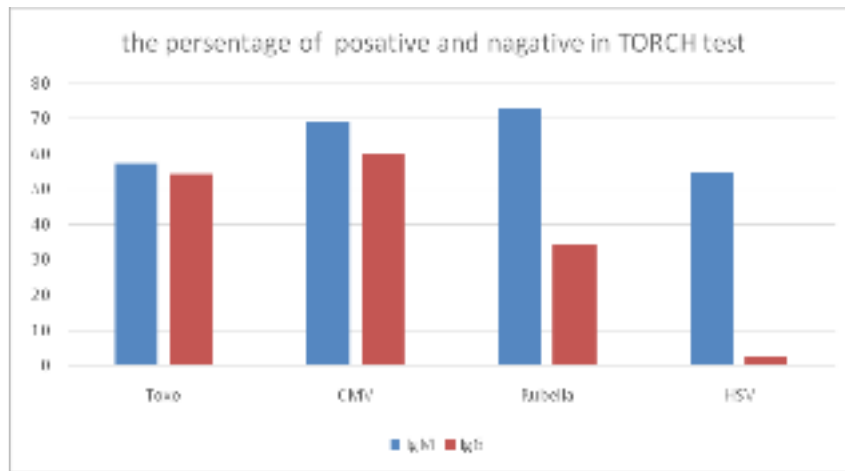


FIGURE 1. Seroprevalence Comparative between TORCH IgG and IgM among women with abortion

[16] That was published similar result about CMV virus and found 93% and (3.0%) positive for IgG and IgM respectively.

[17], was registered that 79.4% were confident for rubella-specific IgG, and positive on IgM acute abortion. Another study by Çetinkaya and Yenilmez, 2019 was found that similar result about the effect of TORCH serum level in causative of abortion.

[18], found that herpesvirus IgG is higher than IgM because of past exposure to the virus while IgM mention to acute cases this finding is corresponding with a study in kingdom of Saudi Arabia, that recorded HSV-2 IgG 14.7%.

6. CONCLUSION

In this study we found more causative agent of abortion and suggested more study about the relationship between pets and human diseases specially in the women and child

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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