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

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Abstract

The 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 cases for 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 bothe IgM,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%).

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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%)
Key world : TORCH test ,abortion , toxoplasma ,HSV,CMV, Rubella .

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.(Stegmann BJ& Carey JC,2002)

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 (Maruyama et al ,2007)

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 (Das , Ramachandran , Arora . 2007)

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 **(** Jones , Lopez , Wilson . 2003) . It normally occurs in children and adults with moderate or asymptomatic infection Nevertheless, virus could irritated the placenta and lead to miscarriage,(Verma et al ,2011) Virus can cross the placenta, leading to miscarriage, fetal death or sever complication such as hearing loos (Lee , Bowden . 2000).

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 [Dollard , Grosse , Ross . 2007).

The incubation period of C.M.V infection from 4 to 12 weeks (Anzivino et al ,2009). Signs may apper 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) (Hareth et al ,2010). The main deficiencies in the childhood such as blinded and loss of hearing a (Cusini Marco, Ghislanzoni Massimo. 2001).

Herpes simples 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 (Biswas et al ,2011). 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,(Singh et al ,2014). There for this study was done to evaluation of abortion causative agent is from TORCH or more than factors.

Materials and Methods:

Prospective study was carried out at the Al-Hikma University college from July 2018 till June 2019.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 teasted with ELISA (Biomeriuex company – Spain following the company instrument guide line.

Statistical analysis

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

Result :

All the results was showed in table 1.

At first 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. This 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.

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).

Table 1. Seroprevelence 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	Positi	94	48.2 %	65	69.1 %	0.196

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	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	Po	11	5.6%	6	54.5	0.192

IgM	siti ve				%	
	Ne gat ive	18 4	94 %	79	43%	
HSV IgG	Po siti ve	55	28%	31	53 %	0.213
	Ne gat ive	14 0	72%	65	46 %	

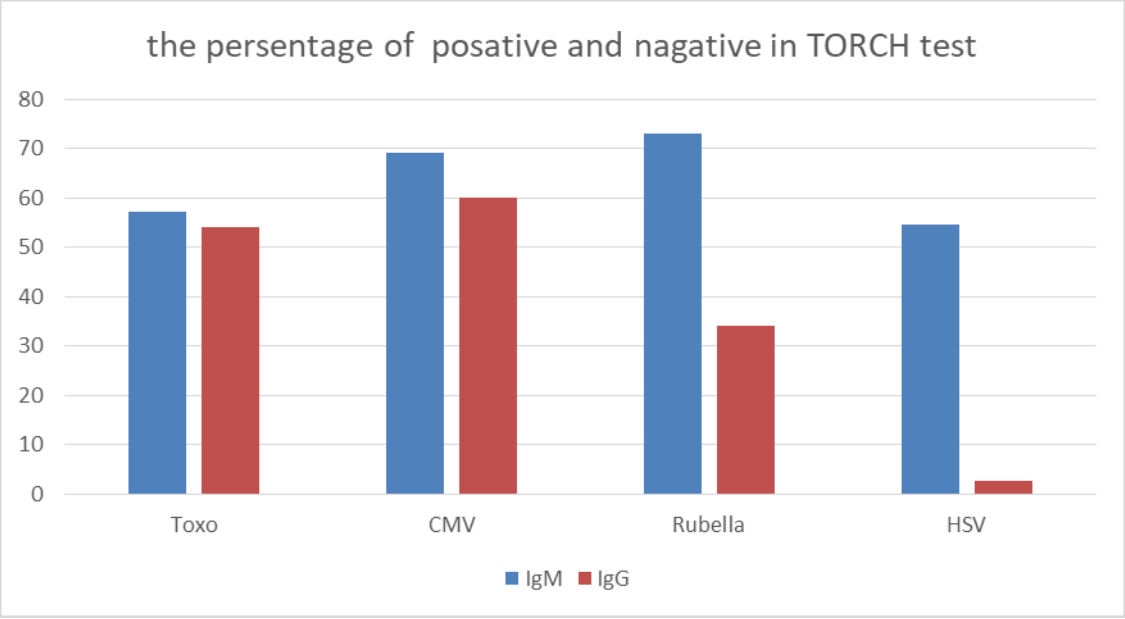

Figure 1(Figure 1: Seroprevelence Comparative between TORCH IgG and IgM among women with abortion

Discussion:

Our study result was agreed with study in Pakistan and comparable results were found in IgM toxoplasmosis. (Sadiqui *et al.*, 2018).

Ahmadpour *et al.*, 2019 showed that positive serological test of IgG and IgM respectively is highly, (Menati Rashno *et al.*, 2019) registered that from 31 sample of IgM, IgG there was 31% is positive .

Porobic-Jahic *et al.*, 2019 was published similar result about CMV virus and found 93% and (3.0%) positive for IgG and IgM respectively.

Wondimeneh *et al.*, 2018, was registered that 79.4% were confident for rubella-specific IgG, and positive on IgM acute abortion . Anther study by **Ç**etinkaya and Yenilmez, 2019 was found that similar result about the effect of TORCH serum levlel in causative of abortion .

Finger- Jardim *et al.*, 2018, 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 % .

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