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Molecular Detection of Chlamydia Trachomatus and Estimation of Interlukin 6 in Women Parents with Vaginosis

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Abstract

In this study 160 women patients who were complaining from even vaginitis were included in this study hi vaginal swabs and Indocervical swabs were taken by Gynolosist

Detection of Chlamydia was do by two methods

1- Rapid testcaset method
2- RT-PCR technique

The results showed that seven samples (4.3%)were positive and 12 samples (7.5%) gives positive results by real time PCR

The later method is more sensitive when comparated to rapid test

Besides blood samples were taken from the same patients to show the interleukin six it was found that interelukin6 was significantly increased (94.33+_10.81) in women patients with chlamydia we comprate with those patients infected with gram positive or gram negative bacteria

Introduction

Chlamydia Trhomatis is one of most pathogen associated with many discovers in women vaginitis were is infection classified with in sexually transmited disease

1- however the pathogen was reported in many other disease such as eye infections and others

2-detection of chlamydia by traditional methods may gives false results so the presence in the RT-PCR methods make this pathogen east to be investigated in vaginal swabs or indocervical swabs

3-several proteste enzymes are produced by this pathogen in wich have amajor role in cavation a disease when be sereted into the host these protes produed along dozen of protiens produced by it. in wich are in diagnosis of the pathogen insid the lineal sarpls

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4-hostsignalling pathway were mean pulate as results of specific pretest by chlamydia trachomatis

5-some immunoglobial factors were found to be incrased by Chlamydia infection where the women show increases in C-reactive protein and also is some cytokine particullary intrleukin 6 wich is significantly higher than normal

6-some studiedfound that chlamydia vaginatus was ireated efficiently by using doxycycline and azythromysin wich have hi effect on this pathogen (7/8)

Aim of study

The aim of study is to investigate Chlamyia vaginatis in women patients with vaginitis

Patients an methods

A-patients : 160 women patients with vaginitis who attending to the department of Gynocology in the hospital of children and maternity in Babylon provonicwere included high vaginal and indocervical swabs optained from parents to be subjected to the next experiment

Ethical approval was obtained directly from the women

B-diagnosis of Chlamydia

Chlamydia is identify by two methods the rapid test asset or stripes from BIOZEC company Holland origin an by real time PR

- INTERLKIN 6 levels determined was one according to the kit information (interleukin Elisa kit) from ABCAM(abubo42)

Results and discussions

In this stdy 160 vaginitis women were subjected for investigation the presence ofChlamydia trachomatis

Rapid test showed seven(4.3%) samples positiveresults for this pathogen were the RT_PCR show 12(7.5%) samples positive shown in table 1.

Table (1) detection of Chlamydia trachomatis by rapid test and real time PCR

Samples numbers	Rapi test for chlamydia	Real time PCR	
160	(4.3%)7	12(7.5%)	

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Its known that reall time PCR method is more accurate than rapid test in detection of Chlamydia trachomatis because of high sensitivity of this method and also its depends on DNA primers wicch are speefic for Chlamydia

However the detection rate of Chlamydiais very identical to the optained by (9) and (10) who found that the rate of etetion of Chlamydia from women with vaginitis dosent excced than 12% (11benu 2014)

Moreover some other bacteria are isolated from patients the reslts showed that Echerhia coli is the predominate followed by Staphyllococus areus Streptococcs agalacia and Enterobacter clocca

Blood samples were obtainfrom 10 patients with sufferent from infection (10 with Chlamydia infection) (10 with gram positive bacteria infection)(10 with gram negative bacteria infection) also 10 blood samples obtained from women with no history of vaginitis a control groupeto show the level of interleukin 6 as cytokines

The result showed that IL6 was increased significantly in women patients with Chlamydia were remain as normal in the other type of infections and control group a shown in the table 2.

Table 2: estimation of interleukin 6 level in woman patients.

Types of infection	Mean vale of Interlkin6	P value p<0.05
Gram positive (10cases)	50.72_+5.08	0.0926
Gram negative(10cases)	48.3_+4.66	0.0994
Chlamydia (10cases)	94.33_+8.81	0.307 signification
Controll groupe(10 ases)	44.6_+3.52	_____

Normal vale 1.5_5.0 pg\ml

Accoring to the data obtained in this study the IL6 is high only in case of Chlamydia infection wich reach(94.33+_10.8) and this result is identifial to that obtained by Kelly eral 2013 (Reference 12) who found that IL6 is high in vaginitis caused by Chlamydia and this cytokine is elevated as immune defenc marker

The interleukin 6 production to Chlamydia is from primary reproductive epithelial cells that may be high variable but also may be high due no Chlamydial strens response protein wich have arole in mainpulario host signaling pathways and stimulatisim the production of cytokines

Financial disclosure

There is no financial disclosure.

Conflict of interest

None to declare.

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Ethical Clearance

All experimental protocols were approved and all experiments were carried out in accordance with approved guidelines.

REFERENCES

1. JZX,HGongo,L Liu infection and Am soc microbio2019 toll like receptor 3(defficiency lead to altered immunoresponse to Chlamydia tracgomatus infection in human oviduct epithelial cells)
2. EMEldamnhouryGAElatrash HM Rashwan willi on lin library 2018(Association between leulocytospermia and semen interleukin 6 and tumurnecrosis facter alpha m in interleukin6 concentration in pregnancies completate by preterm prelabourruputer of membrane)
3. P mpiga S Mansour Rmorisset jornal of wiley2006 wiely online library(sustained interleukin 6 and interleukin 8 iexpression following infection with Chlamydiatrachomatis serovar L2in ahelaTHP 1cello 0cu lture
4. Hagariv N simhan,Marijan AKRohn JamesM Robert Adriana Zeevi, steve N caritisAmerican jornal of obestitrics and gynecology 189(4)915-918 2003 (interleukin 6 promoter-174 polymorphyssim and spontaneous preterm birth)
5. Hirofumi Hanada,Ariaki Nagayama (microbial pathogenesis volum34 isu 2 2003 pag 57-63)(infection of human fibroblast like synovial cell with Chlamydia trachomatis results inpersistent infection and interlekin 6 production
6. CA Leonard RVchoborg.N.Borel-Frontiers in frontier org cellular 2017 (proutive an penellinstressed Chlamydiapecorm infection induces nuclearfactor kappa B activation and interlekin 6 ecretion in vitro)
7. IMusilova, C andrys,M D rahosovaof tylor&fransismaternal fetal&2017(intraaminioticn umblical cord blood interleukin 6 concentration in pregnancies complicated by preterm prelabor ruupter of membranes
8. NCC Almedia,MFA Queiroz,ss Lima frontiers frontiersin ..org 2019(Association of Chlamydia trachomatis Cpnemonia and IL6 and IL8 gen alteration with heart disease
9. SB Rose,SM,Garratt,J Stanley,SRH Pllon,BMC springer_infectious diseases 2017 (diagnosis of Chlamydia trachomatis and Neisseria gonorrohoea in Newzelandaretrospetive cohort study)
10. S Menon.SH,stansfield,B,logan _jornal of opus lib.uts eddu.au-medical 2016 (Development and evolution of mlti antigen pepti elisa for diagnosis of Chlamydia trachomatiss related infertility in women)
11. B Wabo,DS,Nsagha,TN nana-Europian article ejcbs .org 2020 (serodiagnosis of Chlamydia trachomatis and molecular detection of gential Oncogenic Hman papilloma virus among cameroonian women)
12. Kelly,C,Scott,H.,pooda,p,shrti,m, and Vman,c.2013.IL6response to chlamydia .BMCimmunal .14:50-58
13. W,x,Lei,L.,Gorg,s,chan,o.(2011) the chlamydia stress respons protene BMC mirobiol.11:87-94.