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Research Article

**OCCURRENCE AND LINKED RISK FACTORS FOR THE  
COMPLICATION OF SYPHILIS IN FEMALES WITH  
RECURRING ABORTIONS**<sup>1</sup>Dr Amna Kazmi, <sup>2</sup>Dr. Muhammad Shehroz<sup>1</sup>Nawaz Sharif Social Security Hospital Lahore, <sup>2</sup>DHQ Hospital Faisalabad.

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**Abstract:**

**Objective:** This transverse research work carried out to find out the occurrence and linked factors of risks for the complication of syphilis in females having recurring abortions.

**Methodology:** We collected five milliliter blood from every patient with the help of venipuncture method. The collection of the information carried out from questionnaire filed by the females of this study and with the investigation of the samples of blood through VDRL test & FTA ABS test method.

**Results:** Total two hundred and fifty-six females were the part of this research work. The average age of the females was 29.40 years whereas the range of the age of females was 21-38 years. Out of total females, 1.90% (n: 5) were suffering from active syphilis. Most of the females were from lower social & economic class, without education and available with past history of congenital abnormality.

**Conclusion:** The infection with TP (*Treponema Pallidum*) in the females from lower social and economic class was astonishing. There is possibility that because of illiteracy & high amount of unsafe sex is the main cause. The positive condition is also the outcome of various serological study works in the period of pregnancy.

**Key Words:** Syphilis, Transverse, Investigation, Congenital, Abnormality, Venipuncture, Infection.

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**INTRODUCTION:**

The screening of various infections is not available in our country because of the limited availability of the resources especially in the duration of pregnancy including the infections of HIV, syphilis, gonorrhoea, and by birth metabolism error [1]. In our country, the rate of fertility is very high in comparison with many other countries [2]. Syphilis available in the female with pregnancy has association with the low weight at the time of birth, delivery before time and still birth [3]. There is also an association between the prevalence of the syphilis and miscarriage or abortions [4]. The active infection of syphilis is very rare in the countries which are developed ones. But the great amount of the anomalies linked with the congenital syphilis is available in the reports from various areas of the world as far remote areas of our country Pakistan [5].

TP is the main cause of the spread of this complication which is a type of bacterium. There are evidences of the availability of the pathogenic treponemes in the abrasions of syphilis [5]. Treponemes are greatly infectious in nature & there can be availability of saprophytic treponemes on the membranes of mucous present in the mouth, in the ulcers of skin and genital tract [6]. There are three stages of the syphilis which has its transmission due to sexual contact [7]. A mother without treatment in congenital syphilis, the infection of syphilis infects her child in her body. Treponemes have the ability to penetrate through placenta into the plasma of blood. T.P is the cause of infection of fetus which can make the situation difficult in initial stage of pregnancy [8].

There are some risk factors linked with the high occurrence of syphilis like age of female, profession of the husband, no education, and drug addict husband, unfair sex relation of husband with other females and improper transfusion of blood without screening [8, 9]. The real burden of this complication in our country is not clear. Some of the important reasons are lack of education about such complications, no screening tests or their expensive nature and the non-availability of the surveillance system in our healthcare system [9, 10].

**METHODOLOGY:**

This transverse research work carried out in gynecological & obstetric center of Nawaz Sharif

Social Security Hospital Lahore. Most of females of this research work were from the remote areas of the Punjab. Majority of the females were living in those regions where peoples work as farmers or laborers. Most of their houses were of mud. There was no supply of fresh healthy water to most of them. Majority of the females were available without any education. Even most of the females were unaware about the basic values of ethics as provided by their religion.

Every patient gave his consent to participate in the case study who was suffering from recurring abortions. This institute was not only providing the facilities of the healthcare to only people of Bahawalpur but it was providing these facilities to the people living in remote areas. This study covered a period of fourteen months. This research work started in June 2016.n the collected of the information carried out with the help of questionnaire and interview. Lady Doctor checked the patients physically and serological analysis carried out after receipt of the blood sample from each patient.

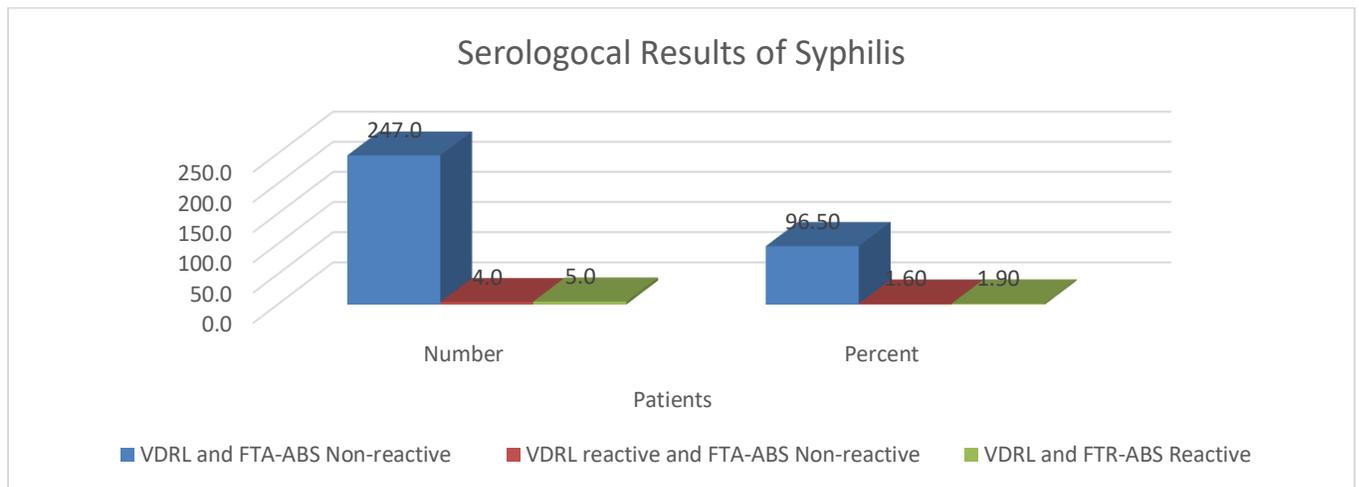
We withdrew five milliliter sample of blood from each patient for further testing with the help of disposable syringes. We transferred the samples of blood to laboratory after their collection and VDR test FTA ABS test methods applied. The patients who were positive in both tests, were suffering from the active syphilis. This finding based on the results of the serological outcome present in any stage of the disease. The females who were available as non-reactive in both types of tests declared as not having syphilis. False positive females were those patients who were reactive in VDRL and non-reactive in the FTA ABS. old treated patients were those females who found reactive in FTA ABS & non-reactive in the test of VDRL.

**RESULTS:**

Total two hundred and fifty-six females with recurring abortions were the part of this research work. We found 1.90% (n: 5) females available with active infection of syphilis (females reactive in both tests VDRL & FTA ABS). Females who were reactive with only VDRL & concluded as false positive or in the stage of very initial infection were 1.60% (n: 4) (these females VDRL reactive but FTA ABS non-reactive).

**Table-I: Serological Results of Syphilis in Women with Recurrent Miscarriage.**

Results	Patients		Interpretation
	Number	Percent	
VDRL and FTA-ABS Non-reactive	247.0	96.50	Negative
VDRL reactive and FTA-ABS Non-reactive	4.0	1.60	False Positive or Pre-mature infection
VDRL and FTR-ABS Reactive	5.0	1.90	Active syphilis



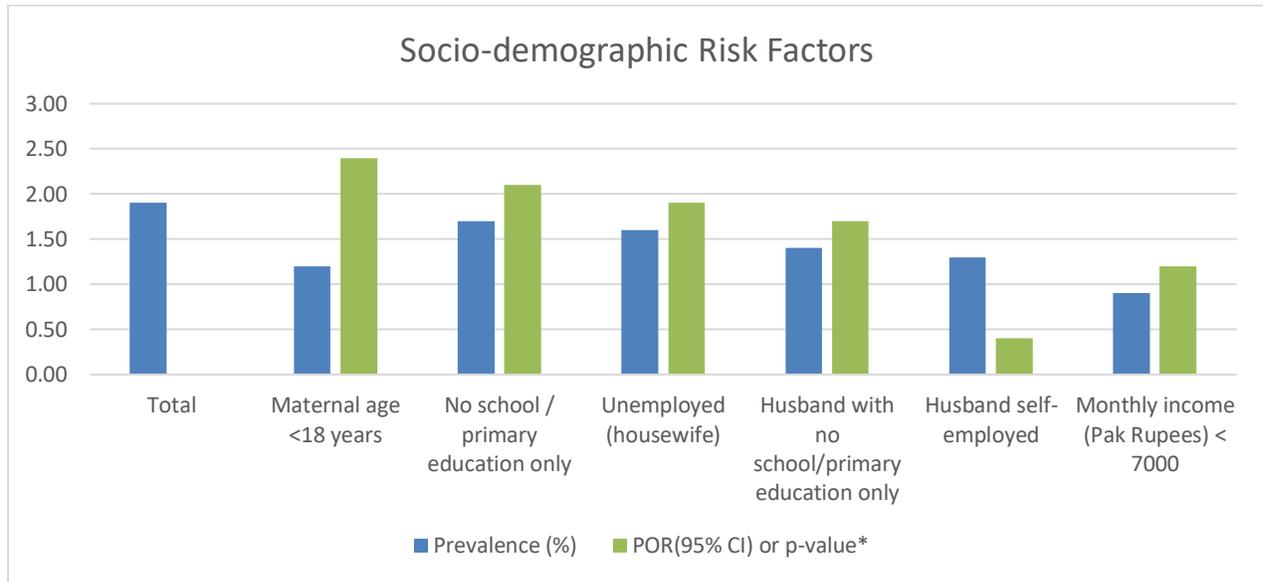
The risk factors were available in the multivariable examination on the basis of relationship standard as mentioned above as age of the female, the profession

of the husband, salary of the husband, no job status, drug addicted husband, unfair relation of husband with other females, and transfusion of blood.

**Table-II: Socio-Demographic Risk Factors Corresponding to Prevalence Odds Ratio (Pors) and Corresponding 95% Confidence Interval (CI) Or P-Value in Women with Recurrent Miscarriage**

Socio-Demographic Risk Factors	Prevalence (%)	Range	POR(95% CI) or p-value*	Range
Total	1.90	(0.60 - 2.30)		
Maternal age <18 years	1.20	(0.40 - 1.00)	2.40	(0.60 - 9.00)
No school / primary education only	1.70	(0.50 - 1.10)	2.10	(0.40 - 8.10)
Unemployed (housewife)	1.60	(0.60 - 1.40)	1.90	(0.50 - 11.10)
Husband with no school/primary education only	1.40	(0.40 - 1.00)	1.70	(06.0 -13.40)
Husband self-employed	1.30	(0.50 -1.10)	0.40*	0.40*
Monthly income (Pak Rupees) < 7000	0.90	(0.40 - 1.30)	1.20	(0.60 - 8.40)

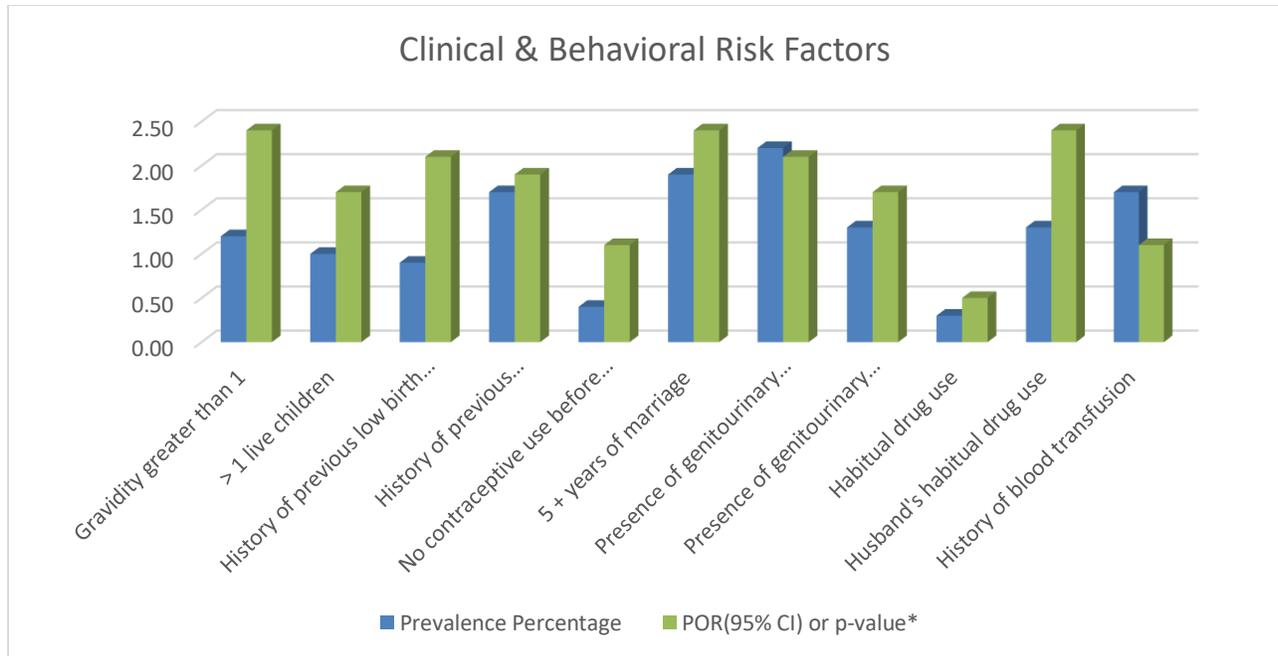
\*Chi-square p-value in absence of 95% CI.



**Table-III: Clinical Risk Factors Corresponding to Prevalence Odds Ratio (Pors) and Corresponding 95% Confidence Interval (CI) Or P-Value in Women With Recurrent Miscarriage**

Clinical Risk Factors	Prevalence		POR(95% CI)	CI Range
	Percentage	Range		
Gravidity greater than 1	1.20	(0.60 -	2.4	(0.20 - 0.40)
> 1 live children	1.00	(0.50- 2.40)	1.7	(0.40 - 7.90)
History of previous low birth weight delivery	0.90	(0.30 -	2.1	(0.50 - 1.00)
History of previous congenital anomaly	1.70	(0.40 -	1.9	(0.40 - 6.10)
No contraceptive use before current pregnancy	0.40	(0.40 -	1.1	(0.50 - 4.10)
5 + years of marriage	1.90	(0.4 - 5.0)	2.4	(0.60 - 13.10)
Presence of genitourinary symptoms	2.20	(0.6 - 12.0)	2.1	(0.40 - 11.70)
Presence of genitourinary symptoms in husband	1.30	(0.40 -	1.7	(0.50 - 3.40)
Habitual drug use	0.30	(0.30 -	0.5*	0.5*
Husband's habitual drug use	1.30	(0.60 -	2.4	(0.60 - 7.70)
History of blood transfusion	1.70	(1.30 -	1.1	(0.4 - 4.30)

\*Chi-square p-value in absence of 95% CI.



### DISCUSSION:

The prevalence of syphilis was 1.90% in current research work. This occurrence rate is much high in comparison with the rate available in United States of America, Mediterranean and countries of Europe [11]. A case study conducted on blood donors of Lahore found 0.80% positivity of syphilis [12]. One other case work carried out in Lahore among men with complaints of skin displayed 31.60% male as positive for the complication of syphilis [13]. One transverse research work of Bangladesh on about eleven hundred females discovered 1.50% occurrence of this complication [14]. A research work in Bulgaria showed 0.90% occurrence of this abnormality [15]. A research work in China displayed the prevalence of .50% which is much low in comparison with the current research work [16].

A research work from India concluded the occurrence of this complication ranged from 2 to 4.80% among females having the age of reproduction [17]. The disparities in the occurrence of this complication in accordance with gender and race are also available in reports [18]. The findings showed that male from 20 to 29 years of age had constantly greater infection rate in comparison with equal age of females [19, 20]. The data about the cause and the development of the occurrence of this disease in our country is not available. The occurrence of syphilis was 0.5% in transmitted through sex in our country [21]. The main reason of the syphilis transmission is sex contact and all the females were denying from unfair sex. All the data was the outcome from females only. Therefore,

their husbands might have the infection which was not present in front of their wives due to unfair sex.

An important relationship of syphilis with voyage of partner of sex in last 1 year like divers of long distances as well as drug abusers is also under consideration [22]. The danger of the transmission of the disease from blood is not much important because of testing of donor & the components of the refrigerated blood [23]. In current case study, the history of transfusion of blood has no association with the spread of infection. There is a need of collaborate efforts to for the screening of this disease in pregnant females to reduce the prevalence of this infection.

### CONCLUSION:

The results of this research work conclude that the complication of syphilis among the females having reproductive age which needs better control as well as prevention of the disease. The knowledge of the females with pregnancy about the vitality of the care in early days of pregnancy, knowledge about the risk factors, high awareness about the development of the infection and the screening of the syphilis is very necessary in initial stage.

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