

A Cross Sectional Study To Assess The Chlamydial Infection Amongst The Women In Reproductive Age Group Presenting With Vaginal Discharge

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Abstract: *Chlamydia trachomatis* has currently emerged as one of the most common sexually transmitted pathogen. *C. trachomatis* infection in the genital tract is a common cause of urethritis, epididymitis, mucopurulent cervicitis, pelvic inflammatory disease (PID), ectopic pregnancy and tubal infertility etc. Keeping these facts in mind, this cross sectional study was performed to assess the prevalence of *Chlamydia trachomatis* infections in women of reproductive age group in the eastern part of India. This is an experimental study where female patients of the reproductive age group were selected for a clinical trial. 50 patients complaining of excessive vaginal discharge were selected as the test sample. 20 women of the same age group presenting with complaints other than excessive vaginal discharge were selected as the control population. This study was carried out at the department of Microbiology of Mata Gujri Memorial Medical College and Lions Seva Kendra Hospital, Kishanganj, Bihar. Patients were referred from the Obstetrics and Gynaecology OPD of this Institution. Subjects were chosen by random selection method. Specimens were collected from the patients presenting with excessive vaginal discharge. The excess discharge from the vagina was cleared from the vagina using a sterile swab stick. Endocervical brushing was also performed. *Chlamydia trachomatis* lipopolysaccharide antigen was detected by rapid immunoassay assay. Instruction manual was followed and quality control was assured. Out of total 50 suspected cases, 4 cases were found to be positive in Chlamydial lipopolysaccharide detecting rapid card test (8%) and amongst the Control population, all 20 of them tested Negative for *C. trachomatis* LPS antigen. In this present study, majority of the cases were reported from the age group >30 years (peak at 34 years). In order to better understand the true burden of *C. trachomatis* on the population, more community-based studies of asymptomatic individuals are needed.

Keywords: *Chlamydia*, LPS, Rapid test

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I. Introduction

Chlamydia trachomatis has currently emerged as one of the most common sexually transmitted pathogen. *C. trachomatis* infection in the genital tract is a common cause of urethritis, epididymitis, mucopurulent cervicitis, pelvic inflammatory disease (PID), ectopic pregnancy and tubal infertility etc. although Chlamydial infection produces less severe symptoms than other sexually transmitted diseases. These deceptively mild symptoms allow the infection to go unnoticed with minimal patient awareness until secondary or tertiary symptoms develop. The sequel of undetected and thus untreated infections like acute salpingitis and pelvic inflammatory disease lead not only to significant morbidity but far more importantly to infertility. Infertility due to *C. trachomatis* represents a preventable type of infertility, if detected early [1,2]. Keeping these facts in mind, this cross sectional study was performed to assess the prevalence of *Chlamydia trachomatis* infections in women of reproductive age group in the eastern part of India.

II. Methodology

This is an experimental study where female patients of the reproductive age group were selected for a clinical trial. 50 patients complaining of excessive vaginal discharge were selected as the test sample. 20 women of the same age group presenting with complaints other than excessive vaginal discharge were selected as the control population. This study was carried out at the department of Microbiology of Mata Gujri Memorial Medical College and Lions Seva Kendra Hospital, Kishanganj, Bihar. Patients were referred from the Obstetrics and Gynaecology OPD of this Institution. Subjects were chosen by random selection method. Specimens were collected from the patients presenting with excessive vaginal discharge. The excess discharge from the vagina was cleared from the vagina using a sterile swab stick. Endocervical brushing was also performed. *Chlamydia*

trachomatis lipopolysaccharide (LPS) antigen was detected by rapid immunoassay assay. Instruction manual was followed and quality control was assured.

III. Results

Out of total 50 suspected cases, 4 cases were found to be positive in Chlamydial lipopolysaccharide detecting rapid card test (8%) and amongst the Control population, all 20 of them tested Negative for *C. trachomatis* LPS antigen.

Fig-1: Pie diagram showing Positivity of Chlamydial LPS antigen

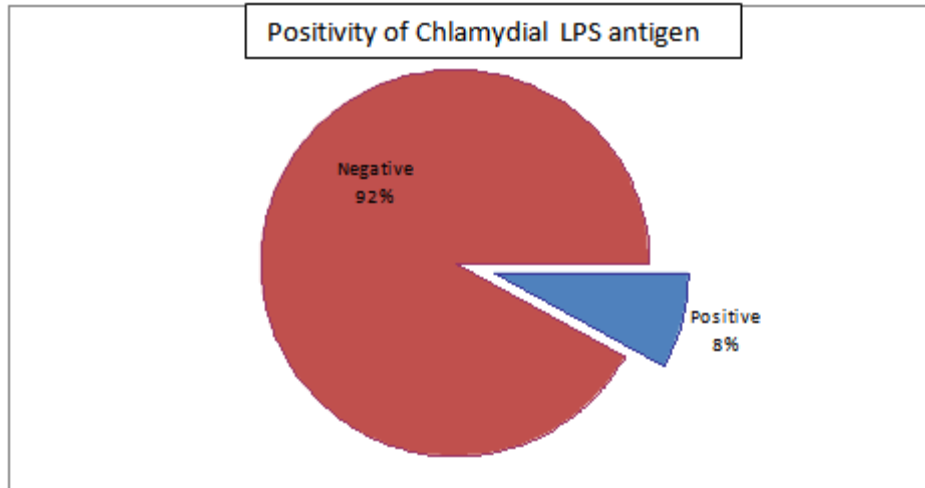
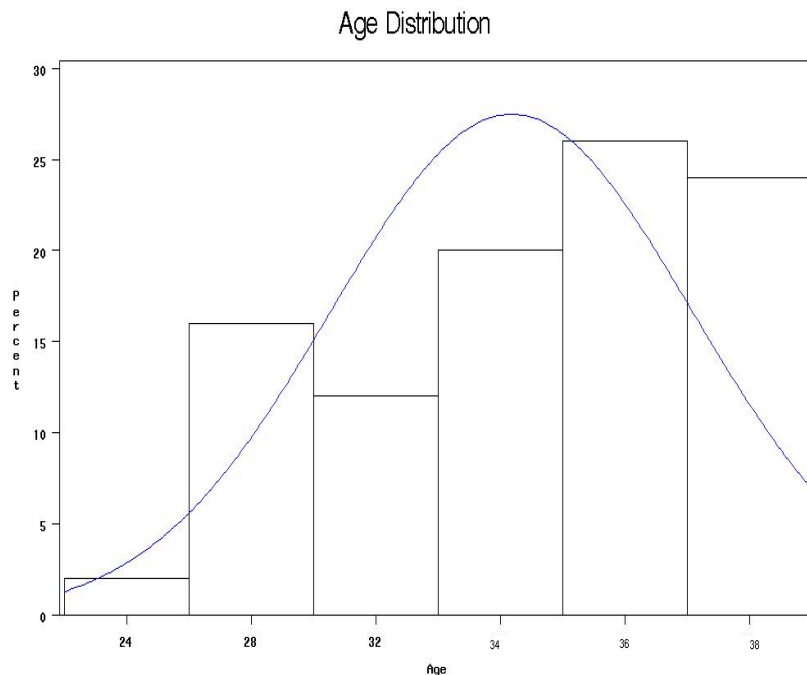


Fig-2: The mean age of the patients in the test group



IV. Discussion

Infertility is becoming an emerging health problem in many countries of the world including India. The increase appears to coincide with the growing role played by *C. trachomatis* as a sexually transmitted disease. A large number of the infected infertile women were asymptomatic. This highlights clinical inadequacy in diagnosing *C. trachomatis*. The incidence of *C. trachomatis* infection was more common in women with secondary infertility. This increased susceptibility could be due to their longer period of active sexual life thus enhancing their exposure to chlamydial infection. Bleeding per vaginum (on touch) and vaginal discharge were found to be more common clinical presentations in symptomatic chlamydia positive cases. Screening of infertile

women for *C. trachomatis* is recommended in the first year of infertility itself so that early therapeutic intervention can be instituted to allow women to conceive naturally [3]. The 8 % positivity seen in this study is similar to the results found in the rest of the country. A study performed by Betha et al with the women in child bearing age showed prevalence of active CT infection among lower risk groups ranged from 0.1% to 1.1% and in higher risk group from 2.7% to 28.5% [4]. In this present study, majority of the cases were reported from the age group >30 years (peak at 34 years). In accordance to this finding, Thappa et al also reported that most vulnerable age group is >25 yrs.

V. Conclusion

Finally, in order to better understand the true burden of *C. trachomatis* on the population, more community-based studies of asymptomatic individuals are needed. In addition, identification of risk factors may help to screen *C. trachomatis* amongst the child bearing women and prevent additional infections.

References

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