



***Chlamydia trachomatis* seropositivity during pregnancy**

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ABSTRACT

Background: *Chlamydia trachomatis* infection in pregnant women can lead to serious maternal/neonatal antenatal or postnatal complications. The aim of this study was to find out the quantum of this problem in antenatal cases of Command Hospital, Kolkata. **Methods:** Antibodies to *C. trachomatis* by ELISA method were tested in sera of 24 pregnant women and 10 nonpregnant controls. **Results:** Five (20.83%) and 3 (12.5%) were positive and borderline positive for IgM and 1 (4.17%) and 2 (8.33%) were positive and borderline positive respectively for IgG antibodies i.e. an overall positivity of 45.83%. Only 1 (10%) of the controls was positive for IgA antibodies. **Conclusions:** This study highlights the importance of performing this simple blood test for detecting *C. trachomatis* infection in antenatal cases, to treat the infected and prevent the complications.

KEY WORDS: *Chlamydia trachomatis* antibodies, Pregnancy

The reported prevalence of *Chlamydia trachomatis* infection among pregnant women has ranged widely from 2 to 30 percent in various studies.¹ Young age, especially adolescence, is a strong predictor of chlamydial infection. Antepartum chlamydial infection appears to play an important part in amnionitis, postpartum endometritis and postabortal salpingitis.¹ Further, it was found that the frequency of fetal complications was higher and the birth weight lower in children whose mothers had chlamydial infection during pregnancy as compared to those whose mothers were uninfected.² Hence it is essential to identify patients at risk and treat them with antichlamydial drugs to prevent any such complications. Detection of *Chlamydia trachomatis* antibodies by ELISA has been recently developed as a diagnostic tool.^{2,7} We thus decided to find out the prevalence of chlamydial infection in antenatal cases.

METHODS

The study was conducted in 24 antenatal cases admitted in Command Hospital (EC), Kolkata during the month of January 2003 and in 10 healthy non-pregnant controls. Blood was tested for *Chlamydia trachomatis* antibodies by Microwell ELISA (Diagnostic Automation Inc., California 91302, USA) in all the cases and controls.

RESULTS

The average age of the cases was 26.5 years and that of the controls was 28 years. The prevalence of antichlamydial antibodies is shown in Table 1. Only one antenatal case gave a history suggestive of antepartum pelvic inflammatory disease and her blood was

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**Table 1: Anti-*Chlamydia trachomatis* antibodies in antenatal cases and controls**

	No.	IgM		IgG		IgA	
		Positive (%)	Borderline positive (%)	Positive (%)	Borderline positive (%)	Positive (%)	Borderline positive (%)
Antenatal cases	24	5(20.83)	3(12.50)*	1(4.17)	2(8.33)	0	0
Controls	10	0	0	0	0	1(10)	0
Total	34	6	3	1	2	0	0

* Including one case with history of antepartum PID

borderline positive for IgM antibodies.

DISCUSSION

Genancy et al² found IgM seropositivity to *C. trachomatis* in 13.64% of the cases and 5.47% of the controls by ELISA technique. Rastogi et al⁸ in a study in antenatal cases in India found a high seropositivity and a low seropositivity to IgM antibodies in 29.4% and 27.7% respectively. However, our study has shown positive results to IgM in 20.83% and borderline positive in another 12.5% of cases. Only 10% of the controls were positive for IgA antibodies and none for IgM or IgG antibodies. Moreover, another 4.17% were positive and 8.33% borderline positive for IgG antibodies, i.e. an overall positivity of 45.83%. IgM antibodies suggest an acute infection.⁹ This highlights the importance of performing this test in all our antenatal cases to treat the infected and prevent any maternal or neonatal antenatal or postnatal complications.

The difference in seropositivity rates between the cases and the controls is due to increased susceptibility of antenatal cases to *C. trachomatis* infection during sexual activity and increased proliferation of the organism in those with antepartum infection, due to the lowered immunity in pregnancy.¹

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