

Prevalence of genital Chlamydia infection in females attending an Obstetrics and Gynecology out patient department in Orissa

Sir,

Chlamydia trachomatis, the most common sexually transmitted asymptomatic infection, when left untreated, leads to complications, like pelvic inflammatory disease (PID), ectopic pregnancy, and infertility in women. To prevent such sequelae the Center for Disease Control and Prevention (CDCP) recommends screening for Chlamydiae in women under the age of 24 years, once in a year, for early diagnosis and treatment.^[1] However, in India, such a practice has not been adopted, probably due to lack of information on the magnitude of this problem. Available reports reveal a wide variation (0.2 to 40%) on its prevalence.^[2,3] There is no report on this infection from the state of Orissa. These cases remain undiagnosed because of lack of laboratory facility and skills. Hence a pilot study has been undertaken, to generate evidence on this infection in this region, using highly sensitive and specific molecular tests, that is, polymerase chain reaction (PCR) followed by southern hybridization. The study has been reviewed and approved by the Human Ethical Committee of the Center.

One hundred and eight married women, with a mean age of 31.35 ± 7.3 years attending the Outpatient

Department of Obstetrics and Gynecology, of the SCB Medical College and Hospital, Cuttack, Orissa, were enrolled during May and June 2005. A standard validated questionnaire was used to record the social, medical, and treatment-seeking history of these women. They belonged to a conservative society with restrictions in premarital sex and customary sexual relationship with the only spouse after marriage; polygamy / polyandry being unusual. They had one of the following complaints; the most common was mucopurulent vaginal discharge (n = 95, 87.9%), pain in lower abdomen / back (n = 77, 71.2%), recurrent abortion, that is, ≥ 2 spontaneous abortions (n = 22, 20.4%), and infertility (n = 14, 12.96%). Multiple symptoms were noted in 74 (68.5%) women, vaginal discharge and pain in the lower abdomen or back were the frequent combination. Mean duration of vaginal discharge and pain in lower abdomen / low backache was 42.8 and 27.3 months, respectively.

The gynecologist did per speculum pelvic examination, to record the clinical signs and to collect cervical specimens, using a sterile cotton swab (Himedia Laboratories Pvt. Ltd., Mumbai, India). Unhealthy cervix and adnexal signs suggestive of pelvic inflammatory disease (PID) were seen in 33.3 and 35.2% of the women, respectively. History of seeking early treatment was recorded only in 22 (20.4%) women, while 16 (14.8%) consulted allopathic practitioners, which suggested the development of PID in 35.2% women due to delayed treatment.

The collected cervical swabs were transported in ice packs to the Institute's (Regional Medical Research Center, Bhubaneswar) laboratory within three hours and stored at -140°C until processed by PCR, following a standardized PCR protocol.^[4] Each specimen, dissolved in 1 ml phosphate buffer saline (PBS), was checked for the presence of four-to-five epithelial cells per high power field as adequate for further processing. DNA was extracted using the extraction kit (Bangalore Genei Pvt. Ltd., India) and a 180 base pair DNA fragment, common to all serotypes of *C. trachomatis* was amplified (PCR reagents: Bangalore Genei Pvt. Ltd., India; Thermal cycler: Gene Amp PCR system 2400, Perkin Elmer) using a primer pair from the conserved region of the major outer membrane protein gene of *C. trachomatis*.^[4] Each PCR product was then processed for southern hybridization using a *C. trachomatis* specific DIG-labeled probe (Roche Diagnostics GMBH, Germany).^[4] Seven (6.4%) specimens were inadequate, thirty specimens had either insufficient DNA or were

with inhibitors or were contaminated and were not processed. The test was successfully conducted on 71 specimens for interpretation and analysis. Five (7.04%) were found positive for *C. trachomatis*. This 7.04% prevalence rate was higher than reports from Mumbai (0.2%)^[2] and the multicentric study of the Indian Council of Medical Research (1.6 – 3.3%),^[5] but less than other reports (12.3 and 29%).^[4,6] Eighty percent of the *C. trachomatis* positive women were above 35 years. All had a monogamous marriage and none revealed premarital sex. Post-marital promiscuity in the women or the partner remained a possibility of infection at this age. No unmarried girl reported with similar complaints for enrollment, might be due to nondisclosure of genital symptoms / disease or out of shyness or the stigma prevailing in the conservative society, indicating lack of awareness about genital infections that affect early treatment.

In conclusion, this is the first report from this region showing 7.04% prevalence rate of *C. trachomatis* infection in symptomatic women from Orissa. This initial information may help the clinicians of the region in treating cases with similar symptoms. However, limitations of the present study are the inclusion of only symptomatic women and small sample size. Further studies in community settings are essential for assessment of the disease burden and planning for health awareness.

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