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Low prevalence of chlamydial endocervical infection in antenatal South Indian women

The role of genital Chlamydia trachomatis infection in pregnancy outcome is controversial. There is a paucity of data from India on the prevalence of genital C trachomatis infection in pregnancy and therefore we determined its prevalence in pregnant women, attending a tertiary care hospital in South India and assessed the effect of such infection on the outcome of pregnancy. C trachomatis infection was diagnosed using Chlamydiazyme test (Abbott Laboratories). This test, reported to be both sensitive and specific, is based on the enzyme immunoassay principle and detects the presence of chlamydia antigen in the endocervix.

Endocervical swabs were collected from 273 consecutive pregnant women attending our antenatal clinics at 26-36 weeks of gestation and processed following the manufacturer's instructions. The results were read in an Abbott Quantum II spectrophotometer using Chlamydiazyme programme. Any result equal to or greater than the cut off value calculated using the programme was considered positive.

Nine of 273 women included in the study were positive. The group studied included 100 primigravidae and 173 multigravidae. Four from the former group and five from the latter tested positive. The prevalence was higher in rural women. Six (5-9%) among 102 rural women were positive compared with three (1-8%) of 171 urban women. The results were compared with the socioeconomically status of patients assessed using a scoring system taking into account the occupation and education of the husband. None of the 44 women with lower scores had chlamydia. Three among 73 women with higher scores and six among 156 middle group were positive. None of these differences were statistically significant. In the nine women with chlamydia, the infection could not be correlated with clinical parameters like vaginal discharge, bleeding on swabbing, ectropion, dysuria or abnormal urine microscopy.

Two hundred and seven women of the study group including seven who were chlamydial antigen positive were delivered in this hospital. Association of chlamydial infection with preterm labour, premature rupture of membrane and low birthweight is shown in the table. Although there was an increased incidence of these in the infected group, the difference was not statistically significant.

The prevalence of C trachomatis in the population studied was 3-3%. The reported prevalence of this infection in pregnancy varies from 2-24%, usually around 7-12%. A prevalence of 2-9% in obstetric patients was reported from China which is similar to our findings.

From the present study which is the first of its kind from India, it appears that prevalence of C trachomatis infection is too low to play any major role in adverse pregnancy outcome in this area. This, however, is a hospital based study and a larger population based study may be necessary to assess the actual magnitude of the problem.

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5 Bradrick MR, Nduya-Achola JO, Mirza NB, et al. Towards developing a diagnostic algorithm for C

Table  Association of endocervical chlamydia infection with pregnancy outcome

<table>
<thead>
<tr>
<th>Test</th>
<th>No. studied</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterm labour</td>
<td>PROM</td>
<td>LBW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>7</td>
<td>1</td>
<td>(14-3)</td>
<td>2</td>
<td>(28-6)</td>
<td>1</td>
<td>(14-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>200</td>
<td>7</td>
<td>(3-5)</td>
<td>35</td>
<td>(17-5)</td>
<td>23</td>
<td>(11-5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PROM = premature rupture of membranes; LBW = low birthweight.
In vitro susceptibility of *Trichomonas vaginalis* strains to metronidazole—a Nigerian experience

Recent reports have indicated the prevalence of cases of refractory vaginal trichomoniases associated with isolates that were resistant to metronidazole.2,5

We have tested the in vitro susceptibility to metronidazole of 41 freshly isolated local strains of *Trichomonas vaginalis* at Jos University Teaching Hospital, Nigeria, to determine the possible emergence of resistant strains in our locality. The strains were isolated using the trichomomasum medium as modified by Adebayo, 1988. The minimum inhibitory concentrations (MIC) of metronidazole to the isolated strains were determined using the disc broth method of Smith and DiDomenico.7

The minimum inhibitory concentration ranged from less than 0.03 mcg/ml to 2.0 mcg/ml, using 102 organisms per millimetre inoculum size and at 2 days incubation period. Thirty strains (73.17%) had MIC of less than 0.03 mcg/ml, while only 3 (7.32%) had the highest prevalent MIC of 2.0 mcg/ml (see table)

<table>
<thead>
<tr>
<th>MIC (Mcg/ml)</th>
<th>% Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.03</td>
<td>73.17</td>
</tr>
<tr>
<td>0.06</td>
<td>7.32</td>
</tr>
<tr>
<td>0.25</td>
<td>2-43</td>
</tr>
<tr>
<td>0.50</td>
<td>2-88</td>
</tr>
<tr>
<td>1-0</td>
<td>2-88</td>
</tr>
<tr>
<td>2-0</td>
<td>2-32</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

It is therefore concluded that the *Trichomonas vaginalis* strains in our locality are still very sensitive to metronidazole, and any treatment failures may be due to non-compliance and re-infection on the part of the patients. Also the cure of vaginal trichomoniases does not simply have a direct relationship between susceptibility of the organism and drug dosage, but probably depends on a complex interaction of several factors including drug susceptibility, intra-vaginal redox potential which may regulate the amount of drug taken up by the parasite1 and the accompanying vaginal microflora which may modify the amount of available drug in situ.2

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5 Muller M, Lindmark DG. Uptake of metronidazole and its effect on viability in *trichomonas* and Entamoeba