Prevalence of *Chlamydia trachomatis* and genital mycoplasmas in asymptomatic women

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To establish the prevalence of *Chlamydia trachomatis*, *Mycoplasma hominis* and *Ureaplasma urealyticum* in women attending a family planning and a prenatal clinic in Halifax, cervical swabs were obtained at the time of the first visit from 491 women who had no symptoms of genital infection. Among the women attending the family planning clinic *M. hominis* occurred in combination with *C. trachomatis* more frequently than expected (p < 0.05). It occurred in the absence of *U. urealyticum* in only a few cases (13% of the occurrences in the family planning clinic and 6% of those in the prenatal clinic). *C. trachomatis* was significantly more prevalent in women under 25 years of age (p < 0.04). However, mycoplasmas were as prevalent in women over 30 years as in those under 30. There were no significant differences in the infection rates of the organisms by trimester among pregnant women. More research is necessary for a proper understanding of the role of *M. hominis* and *U. urealyticum* in genitourinary infections and pregnancy outcomes.

Afin de déterminer la fréquence de *Chlamydia trachomatis*, *Mycoplasma hominis* et d' *Ureaplasma urealyticum* chez les clientes d'une consultation de planification familiale et d'une consultation prénatale à Halifax, on a fait lors de la première visite des prélèvements du col utérin chez 491 femmes ne présentant aucun symptôme d'infection génitale. Chez les consultantes en planification familiale on trouve la présence simultanée de *M. hominis* et de *C. trachomatis* en nombre plus élevé que le nombre attendu (p < 0,05). *M. hominis* ne se retrouve pas souvent en l'absence d' *U. urealyticum* (13% des fois en planification familiale et 6% en consultation prénatale). La fréquence de *C. trachomatis* est significativement plus grande (p < 0,04) chez les femmes de moins de 25 ans, alors que les mycoplasmas ne montrent aucune différence de fréquence avant ou après 30 ans. Chez les gestantes, on n'observe aucune différence de fréquence de ces divers agents selon le stade de la grossesse. Il y a lieu d'étudier plus avant l'importance de *M. hominis* et d' *U. urealyticum* dans les infections génito-urinaires et dans l'issue de la grossesse.

To establish the prevalence of *Chlamydia trachomatis* and genital mycoplasmas (*Mycoplasma hominis* and *Ureaplasma urealyticum*) in women attending the Family Planning and Prenatal clinics at Grace Maternity Hospital, Halifax, cervical swabs were obtained from October 1980 to October 1981 at the time of the first visit from 491 women who had no symptoms of infection.

Table I—Prevalence rates of infection with *Chlamydia trachomatis*, *Mycoplasma hominis* and *Ureaplasma urealyticum* in 355 women attending the Family Planning Clinic and 136 attending the Prenatal Clinic

<table>
<thead>
<tr>
<th>Organism</th>
<th>Rate (and % of women)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Planning Clinic</td>
</tr>
<tr>
<td><em>C. trachomatis</em></td>
<td>29 (8.2)</td>
</tr>
<tr>
<td><em>M. hominis</em></td>
<td>126 (35.5)</td>
</tr>
<tr>
<td><em>U. urealyticum</em></td>
<td>256 (72.1)</td>
</tr>
</tbody>
</table>

Table II—Number of women infected with the organisms

<table>
<thead>
<tr>
<th>Organism</th>
<th>No. (and %) of women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Planning Clinic (n = 355)</td>
</tr>
<tr>
<td><em>C. trachomatis</em> only</td>
<td>7 (2.0)</td>
</tr>
<tr>
<td><em>M. hominis</em> only</td>
<td>13 (3.7)</td>
</tr>
<tr>
<td><em>U. urealyticum</em> only</td>
<td>140 (39.4)</td>
</tr>
<tr>
<td><em>M. hominis</em> + <em>U. urealyticum</em> only</td>
<td>97 (27.3)</td>
</tr>
<tr>
<td><em>M. hominis</em> + <em>C. trachomatis</em> only</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td><em>U. urealyticum</em> + <em>C. trachomatis</em> only</td>
<td>6 (1.7)</td>
</tr>
<tr>
<td><em>U. urealyticum</em> + <em>M. hominis</em> + <em>C. trachomatis</em> only</td>
<td>13 (3.7)</td>
</tr>
<tr>
<td>None of the three</td>
<td>76 (21.4)</td>
</tr>
</tbody>
</table>

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genital infection. The patients included both black and white women of low socioeconomic status. The specimens were cultured for C. trachomatis, M. hominis and U. urealyticum.

Table I shows the prevalence rates of infection with the organisms; Table II shows the number of women infected. In the women attending the Family Planning Clinic, M. hominis occurred in combination with C. trachomatis more frequently than expected (p < 0.05). The presence of M. hominis was closely associated with that of U. urealyticum (p < 0.001); the former occurred in the absence of U. urealyticum in only 16 (13%) of the 126 cases in the Family Planning Clinic and 3 (6%) of the 54 cases in the Prenatal Clinic. C. trachomatis was significantly more prevalent in women under 25 years of age than in older women (p < 0.04). However, mycoplasmas were as prevalent in women over 30 as in those under 30. There were no significant differences in the infection rates of the organisms by trimester in pregnant women.

Comments

The prevalence rate of both C. trachomatis and M. hominis in the clinics was fairly high. However, the rate of M. hominis was similar to that found by McCormack and colleagues1 at Boston City Hospital in prenatal and gynecology patients (39.9%). The rate of C. trachomatis in the Family Planning Clinic was similar to that found in a family planning clinic in Seattle (7.6%).2

M. hominis has been found in other studies to be more prevalent among single women, black women and women who are infected with U. urealyticum,3 use oral contraceptives, have a history of gonorrhea,1 have more than one sexual partner, began to have intercourse at an early age or are infected with C. trachomatis.4 Therefore, the prevalence rate of M. hominis in a particular clinic depends on the characteristics of the women attending the clinic. Number of sexual partners is probably the most important variable; a history of gonorrhea, being single, beginning intercourse at an early age and presence of other organisms, such as C. trachomatis, are all indicators of numerous sexual partners.

In two other studies no differences were found in the rate of infection with mycoplasmas between younger and older women.5 C. trachomatis is usually found to be more prevalent in younger women. Rates of U. urealyticum in asymptomatic women tend to be high. The prevalence of U. urealyticum in patients with and without nongonococcal urethritis is similar.6 Gibbs and associates7 in 1983 found M. hominis more frequently in women with intrauterine devices than in controls, whereas the rate of U. urealyticum was the same in both patients and controls.

Much more research is needed for a proper understanding of the role of M. hominis and U. urealyticum in genitourinary infections and pregnancy outcomes. As has been emphasized by other researchers,8,9 the relation of mycoplasmas to other organisms that inhabit the female genital tract must be clarified.

References


Examinations

The written examinations of the Royal College are held in September each year. Applicants wishing to sit the examinations should note the following:

1. Every applicant for admission to the examinations must submit an application for assessment of training.
2. Applicants in training in Canada should apply for preliminary assessment of training at least one year before they expect to sit the examinations, that is by September 1st of the preceding year.

Applicants who have had training outside Canada should submit their initial application for assessment at least 18 months before they expect to sit the examinations, that is by March 1st of the preceding year.

Only applicants whose assessment of credentials is complete will be accepted to sit the examinations.

3. Applicants who desire to sit an examination, having complied with the above requirement of preliminary assessment of training, must notify the College in writing of their intent before February 1st of the year of the examination. Upon receipt of this notice of intent, the evaluation of the applicant's performance during training will be added to the previously completed assessment of credentials. Each applicant will then receive notification as to eligibility.

Those accepted as candidates will receive an examination application form to be completed and returned to the College.

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(c) Specific requirements for training and regulations relating to the examinations in each specialty. Please indicate the specialty or specialties you are interested in.
(d) Listing of specialty training programs in Canada accredited by the College.

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