

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*, de *Mycoplasma hominis* et d'*Ureaplasma*

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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 mycoplasmes 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

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

Organism	Rate (and % of women)	
	Family Planning Clinic	Prenatal Clinic
<i>C. trachomatis</i>	29 (8.2)	15 (11.0)
<i>M. hominis</i>	126 (35.5)	54 (39.7)
<i>U. urealyticum</i>	256 (72.1)	102 (75.0)

Table II—Number of women infected with the organisms

Organism	No. (and %) of women	
	Family Planning Clinic (n = 355)	Prenatal Clinic (n = 136)
<i>C. trachomatis</i> only	7 (2.0)	3 (2.2)
<i>M. hominis</i> only	13 (3.7)	3 (2.2)
<i>U. urealyticum</i> only	140 (39.4)	47 (34.6)
<i>M. hominis</i> + <i>U. urealyticum</i> only	97 (27.3)	43 (31.6)
<i>M. hominis</i> + <i>C. trachomatis</i> only	3 (0.8)	0 (0.0)
<i>U. urealyticum</i> + <i>C.</i> <i>trachomatis</i> only	6 (1.7)	4 (2.9)
<i>U. urealyticum</i> + <i>M. hominis</i> + <i>C. trachomatis</i>	13 (3.7)	8 (5.9)
None of the three	76 (21.4)	28 (20.6)

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 gonorrhoea,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 gonorrhoea, 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.^{1,5} *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

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