Study of the management of chlamydial cervicitis in general practice

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SUMMARY. The role of the general practitioner in the detection and management of Chlamydia trachomatis *infections of the cervix is uncertain. The management by the primary care team of women presenting with lower genital tract symptoms has therefore been studied in one suburban practice. Of 386 women presenting with lower genital tract symptoms over the two year study period 25 (6%) had a positive cervical MicroTrak (Syva) test for* Chlamydia trachomatis. *Twenty four of these chlamydia positive patients were given their results and treatment by the practice. Twenty two women returned for a follow-up MicroTrak test after treatment and two of these patients (9%) had a positive test following treatment. A review of the patients' notes indicated that contact tracing had been discussed with 22 of the 25 chlamydia positive patients. The results of the management of chlamydial cervicitis by this primary health care team are acceptable when compared with studies from hospital clinics. Provided the primary care team has access to facilities for the diagnosis of* C trachomatis *and can follow up non-attenders to ensure they receive their results, provide information about contact tracing and follow up positive patients then chlamydial cervicitis can be managed in general practice.*

Introduction

THE current and future role of the general practitioner in the detection and management of *Chlamydia trachomatis* infections of the cervix is uncertain. In the past the isolation of *C trachomatis* relied on cell culture, and difficulties with collection, storage and transport of specimens meant that departments of genitourinary medicine were therefore responsible for diagnosing and managing nearly all genital chlamydial infections. However, with the introduction of non-culture methods of diagnosis such as the MicroTrak (Syva) test,[1] it is now possible for chlamydial infections to be diagnosed in primary care.

As recently as 1989 members of a genitourinary medicine department stated that 'most general practitioners who suspect or diagnose sexual transmitted disease should continue to refer the patient to a genitourinary medicine clinic'.[2] It would therefore appear to be an appropriate time to discuss the question of whether chlamydial infections can, or should, be managed in general practice. To that end, a study has been carried out of one practice's experience over a two year period of managing women who presented with lower genital tract symptoms. While several studies have described the detection of chlamydial cervicitis in general practice,[3,4] no results have been presented of the management of this condition in primary care.

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Method

The study practice is located on a suburban, mixed private and council housing estate with a population which is predominantly Caucasian and of social classes 3 and 4 (Registrar General's classification). The study was carried out from September 1987 to August 1989. The mid-1988 practice list size was 6967 with 2467 women in the age range 15–65 years. There is a yearly practice turnover of approximately 12% of the total list size.

Women between the ages of 15 and 65 years who presented to the practice with lower genital tract symptoms, that is, vaginal discharge and/or vaginal soreness and/or vulval irritation, were entered into the study. A questionnaire was used to record the patient's symptoms, signs, sociodemographic information and investigation results.

The investigations performed included high vaginal swabs for culture of yeasts, *Gardnerella vaginalis* and anaerobes. The swabs were placed in Stuart's medium and stored at 4 °C until transported to the Public Health Laboratory Service. Specimens were transported daily from the practice to the local laboratory. A cervical swab for culture of *Neisseria gonorrhoeae* was placed in Stuart's medium and stored at room temperature until transported. Culturing for the gonococcus was begun within one hour of the arrival of the specimen at the laboratory. If, on examination, vulval lesions were seen then a swab from the lesion was placed in virus transport medium for culture of herpes virus. For the identification of *C trachomatis* a cervical swab was taken and smeared onto a MicroTrak slide, transported to the laboratory in a slide box, fixed, and stained with monoclonal antisera to *C trachomatis* before being examined under a fluorescence microscope with dark ground condenser. This test was interpreted as positive if five or more elementary bodies were seen. The MicroTrak slides were read by an experienced medical laboratory scientific officer. The practice medical laboratory scientific officer performed wet mount microscopy for *Trichomonas vaginalis,* yeasts and clue cells, and carried out the amine test.

The practice nurse entered all the MicroTrak results in a ledger. If patients with a positive MicroTrak test failed to return for their results she wrote or telephoned to inform them of their positive result and asked them to make an appointment.

Treatment regimens for *C trachomatis* infections were left to each general practitioner in the practice to decide upon, with the majority prescribing erythromycin 250 mg six hourly for seven to 14 days. Patients were asked to return for a follow-up MicroTrak test one or two weeks after completion of treatment. When contact tracing was discussed with the patient, either by the practice nurse or the doctor, information was provided about the local genitourinary medicine clinic.

Clinical management of other organisms identified was decided upon by each patients' general practitioner.

Results

Over the two year study period 488 women aged 15–65 years presented at Llanedeyrn health centre with lower genital tract symptoms, and 386 (79%) were entered into the study. Patients were excluded from the study if they presented on a Friday afternoon, or if they declined investigations.

Table 1 gives the incidence of the different organisms identified by the Public Health Laboratory Service. Two of the 25 patients

with chlamydial cervicitis had a past history of genital chlamydial disease, one managed by a genitourinary medicine clinic and one by a hospital inpatient department.

Of the 25 chlamydia positive patients 24 (96%) were treated by the practice. The remaining patient had moved, but the name of her new general practitioner was obtained through the local family practitioner committee and the doctor was informed that this patient had an untreated chlamydial infection.

Twenty two of the 25 chlamydia positive patients returned for a follow-up MicroTrak test after treatment. Two patients had a positive test, giving a re-identification rate following treatment of 9%. Both these patients had failed to return immediately after treatment, but had presented with a recurrence of their lower genital tract symptoms within two months of their first presentation. They both had negative MicroTrak tests after retreatment. The three patients who did not attend for a test-of-cure MicroTrak test were found to have left the practice.

A second follow-up MicroTrak test was performed on 17 of the 25 patients at a mean of 10 months after their first presentation (range two to 24 months). One of these 17 patients had a positive MicroTrak test, giving a re-infection rate during long-term follow up of 6%.

A review of the patients' notes indicated that contact tracing had been discussed with 22 of the 25 chlamydia positive patients.

Table 1. Organisms identified in 386 women with lower genital tract symptoms.

Organism	Number (%) of patients
Gardnerella vaginalis	140 *(36.3)*
Candida albicans	133 *(34.5)*
Anaerobes	78 *(20.2)*
Chlamydia trachomatis	25 *(6.5)*
Trichomonas vaginalis	9 *(2.3)*
Streptococcus milleri	7 *(1.8)*
Haemophilus species	4 *(1.0)*
Staphylococcus aureus	2 *(0.5)*
Neisseria gonorrhoeae	1 *(0.3)*
Herpes virus	1 *(0.3)*

Discussion

The feasibility and value of using the MicroTrak test to detect genital tract chlamydial disease in women in a general practice population has been described.[4] In a more comprehensive review of recent developments in the diagnosis of *C trachomatis* genital infections Stamm[5] reported a median sensitivity of 77% (range 61–96%) and a median specificity of 97% (range 94–99%) for the MicroTrak test when compared with cell culture in a population of women with intermediate prevalence of the infection (9–11%). The expertise of the laboratory staff in reading the MicroTrak slides is crucial to the accuracy of the test. The other main non-culture method for the detection of *C trachomatis* is enzyme-linked immunoassay (ELISA) but its use in general practice has not been described. In a study comparing the MicroTrak test, ELISA test and cell culture, Taylor-Robinson and colleagues[6] reported that the MicroTrak test was as sensitive and specific as cell culture but that the ELISA test had a lower sensitivity (approximately 70%) and specificity (approximately 90%). When the MicroTrak test is used in a population where there is a low prevalence of infection the problems of false positive and false negative results must be understood by the clinician, and this awareness incorporated into management plans. These problems will only be resolved by the introduction of second-generation non-culture methods of diagnosis with higher specificity and sensitivity.

There are many components to the successful management of a patient with chlamydial cervicitis. Initially, the patient has to be informed of the positive results and be prescribed treatments which she must take. She needs to be informed of the possibility that her current and recent sexual partners may also have an infection and need to be investigated. She must pass this information on to her partner(s) who must then seek medical attention. The patients should return after treatment for a follow-up consultation. Successful management is therefore demanding of the patient, her partner(s) and the health care team involved in her diagnosis and treatment.

In this study 24 of the 25 chlamydia positive patients were given their results and treatment by the practice. This would suggest that general practice can successfully undertake the first stage of the management of patients with chlamydial cervicitis. The practice had a chlamydia re-identification rate following treatment of 9% (2/22), and a re-infection rate following a negative test-of-cure MicroTrak test of 6% (1/17). In a study of 298 women with chlamydial cervicitis attending a gynaecology outpatients department in Sweden, 266 women returned for follow-up cultures after treatment; 22 (8%) were still positive.[7] Of 200 women with chlamydial cervicitis diagnosed in a UK genitourinary medicine clinic, 35 defaulted and could not be followed, and eight failed to complete treatment. After treatment *C trachomatis* was re-isolated in 42 (27%) of the remaining 157 patients.[8] In a further study from a genitourinary medicine clinic of 75 patients with chlamydial cervicitis 64 were available for follow up and all were chlamydia negative after treatment.[9] While the length of follow up, the proportion of patients available for follow up, the medication used, and the setting varied in these studies the re-identification rate following treatment in general practice would seem to be acceptable when compared with these results.

The essence of contact tracing is that the chlamydia positive patient should realize that her current and recent sexual partner(s) may be infected and need to be investigated. In a study from Sweden 53% of male contacts of female patients infected with *C trachomatis* were themselves harbouring chlamydia, half of them being symptomless.[10] In a hospital study of contact tracing for patients with gonorrhoea or syphilis it was found that not all infected patients were interviewed about their contacts.[11] The authors concluded that until contact tracing included all infected patients, the effect of such tracing on the control of sexually transmitted diseases would be of limited value and difficult to assess. In this primary care study contact tracing was discussed with 22 of the 25 chlamydia positive patients. There are as yet no figures for contact tracing in chlamydia positive women from UK genitourinary medicine clinics with which to compare these results. The wider role of the health adviser in genitourinary medicine clinics in discussing health education, life style and decreasing the risk of acquiring further sexually transmitted infections is now established.[12]

For chlamydial cervicitis to be managed in general practice diagnostic facilities must continue to be available, patients must receive their results, information about contact tracing must be provided, and positive patients must be followed up. In this study the follow up included a test-of-cure MicroTrak investigation. The place of test-of-cure investigations, and the role of ELISA and cell culture in this situation has been discussed.[13] We suggest that this study demonstrates that chlamydial cervicitis can be managed in general practice.

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