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## CASE REPORT

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# *Chlamydia trachomatis* in general practice: a preliminary report

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**SUMMARY.** A case of *Chlamydia trachomatis* diagnosed in general practice is described. It is argued that, in the future, the culture methods used in this study, together with the application of at risk criteria, could identify in general practice most patients suffering from chlamydial disease.

### Introduction

**C**HLAMYDIA *trachomatis* is now established as a common and frequently identified genital tract pathogen causing some 40 to 50 per cent of cases of non-specific genital infections (Schacter, 1978). However, in the UK, this rapidly expanding problem has, until now, been diagnosed solely within specialist departments.

We have become interested in the management of vaginal discharge in general practice (Haworth and Moss, 1981) because pelvic inflammatory disease, both within general and hospital practice, is becoming more common. We therefore set up a prospective study which aims to establish the feasibility of culturing in the general practitioner's surgery the organism *Chlamydia trachomatis* in at risk patients, and to determine the incidence of *Chlamydia trachomatis*, isolated from the endocervix of female at risk patients presenting with genital symptoms.

This prospective study is currently in progress in the Balby Health Centre in conjunction with the departments of genito-urinary medicine and microbiology at Doncaster Royal Infirmary. Although the project is planned to last two years, we wish to report our first isolation of *Chlamydia trachomatis* in the surgery.

### The case

A 20-year-old, single hairdresser with no known previous history of sexually transmissible disease presented

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at routine consultation on 14 July 1981 with a two-week history of a non-offensive, heavy vaginal discharge with associated vulval pruritus over the previous two weeks. She had recently stopped the combined oral contraceptive because of headaches and was using no effective contraceptive method. She said that she had had two recent casual consorts over the preceding six-week period. A routine cervical smear in February 1980 was negative.

On examination, she had a gross proliferative cervicitis with contact bleeding and a frothy, grey-white discharge in the vaginal vault. There was a muco-purulent plug at the cervical os.

Swabs from the posterior vaginal vault were placed into Stuart's medium for culture of *Trichomonas vaginalis* and *Gardnerella vaginalis*, plus an endocervical charcoal swab for *Neisseria gonorrhoeae* (Reeve *et al.*, 1975). Following this, a standard swab was taken from the cleaned endocervix and the contact bleeding areas of the ectocervix, and was placed into chlamydia transport medium (Mallinson *et al.*, 1981). Swabs must be free of vaginal contamination, or inhibition of cell culture will occur. This medium was kept at +4°C until transported to the department of microbiology the same day. The specimen for chlamydia was then treated as follows.

The specimen was inoculated onto a monolayer of McCoy cells (Evans and Taylor-Robinson, 1979) and then centrifuged at 2000 g for two hours at 20°C. The culture was then incubated for a further three hours at 35°C. After three hours the medium was removed and replaced by medium containing 1.0 µg/ml cyclohexamide. After a further 48 hours' incubation, the cells were fixed and the cover slips were removed and stained by immunofluorescence (Munday *et al.*, 1980).

Results of the investigations showed positive cultures for *Neisseria gonorrhoeae* in the endocervical canal, *Chlamydia trachomatis* from the cervix, and *Gardnerella vaginalis* and *Trichomonas vaginalis* from the posterior vaginal vault.

The patient was counselled and referred to the department of genito-urinary medicine for treatment, contact tracing and for confirmation of cure following therapy. On examination in the department a gonococcal urethritis was also found.

## Discussion

In 1981 a total of 452 cases of proven infection with *Chlamydia trachomatis* was found in 3,068 new cases referred to the department of genito-urinary medicine at the Doncaster Royal Infirmary. In other words, approximately one in six of all new cases were suffering from this disease. These preliminary findings from the prospective study support the belief of Holmes (1981) in the USA that chlamydial infections are epidemic but that they are neither well recognized nor correctly treated in many instances. Unpublished evidence from the Public Health Laboratory Service suggests that in the UK there are at least three times as many chlamydial infections as gonococcal infections in every general practice. Yet even this may be an underestimate, given the restricted facilities for culturing this pathogen. In Sweden, the relative incidence is even higher. In a study of 3,794 consecutive women attending a gynaecological outpatient clinic with symptoms of lower genital tract infection, 9.2 per cent had *Chlamydia* and 2.2 per cent gonorrhoea, a ratio of approximately 4.2:1 (Svenson *et al.*, 1981).

We suggest that more widespread investigation of *Chlamydia trachomatis*, including smears taken in general practice, could be expected to produce a large number of positive results. Our case study demonstrates that the pathogen can be isolated and diagnosed in general practice by a simple method that can be used at the same time as a routine endocervical swab is taken for *Neisseria gonorrhoeae*.

There is no doubt that if either organism is cultured from a patient, the general practitioner must refer the patient for specialist treatment. Our patient's infections also demonstrated a fundamental concept, vital in the successful management of sexually transmitted diseases: family and hospital practitioners must be aware that where one sexually transmitted disease has been identified, there is a high risk that the patient will have a second, third or even fourth infection (Kinghorn, 1978).

*Chlamydia trachomatis* is a common and potentially serious disease. However, few hospitals provide a culture service. Such a service would allow frequent and routine diagnosis in general practice. Meanwhile, the use of at risk criteria can allow identification of most patients suffering from chlamydial disease. These criteria were originally listed by Adler and colleagues (1981). Our modified list is as follows:

1. Age 15 to 24.
2. Young when married.
3. Several pregnancies (below the age of 20).
4. Separated/divorced.
5. Previous termination of pregnancy.
6. Newly living away from home.
7. Mobile occupation.
8. Previous history of sexually transmitted disease.
9. Being in the care of the local authority and courts.

10. History of running away.
11. Tattoos.
12. Previous suicide attempt.
13. Previous drug abuse.
14. Problems of sexual orientation.
15. Prostitution.
16. Recent change of sexual partner.

We are unable to state at present how many cases would be identified by routine investigation in general practice, but we hope that the extended two-year prospective study will provide this information.

## Conclusion

As yet, the culture of *Chlamydia* in general practice is a research tool only. However, it may become useful in diagnosis. It could identify those patients who can be offered appropriate treatment before they develop any permanent tissue damage (Mardh *et al.*, 1977). Identification within general practice can also benefit the NHS by minimizing the cost of admission, investigation and management of chronic pelvic inflammatory disease and chronic pelvic pain.

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