

## Management of *Chlamydia trachomatis* in a women's hospital: A review of current practice

**Toni Gleave**, RGN, BA (Hons), MSc, *Specialist Nurse Colposcopist*, **Jennifer J Hopwood**, MFFP, Dip Ven, *Department of Health Chlamydia Pilot Coordinator (Wirral), Liverpool Women's Hospital, Crown Street, Liverpool, UK*. **Harry Mallinson**, PhD, *Principal Microbiologist, PHLS Laboratory, University Hospital, Aintree, Liverpool, L9 7AL*

**Correspondence.** Dr JJ Hopwood, *Chlamydia Pilot Office, Evidence Based Practice Centre, St Catherine's Hospital, Birkenhead, CH44 0LQ. Tel: 0151 653 4416, Fax: 0151 651 1642.*

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### Abstract

**Objective.** To establish a measure of testing for *Chlamydia trachomatis* within the Liverpool Women's Hospital with a view to optimising both testing and management of infection. **Design.** Prospective observational study to review the outcome of *Chlamydia* testing and subsequent management of patients between September 1997 – September 1998.

**Results.** It was observed that opportunities for detecting infection were missed and testing was undertaken predominantly for diagnostic purposes.

**Recommendation.** Consideration be given to a centralised system for overview of positive results linking with audit/education to reduce sequelae of *Chlamydia* within gynaecology.

### Background

Delay in diagnosis/treatment of genital tract *Chlamydia trachomatis* may result in unnecessary, costly and potentially litigious complications. Costs of infection in the UK are estimated at over £200 million per annum.<sup>1</sup> All health professionals have a duty to consider their role in this aspect of health care. Gynaecologists may be more familiar with the consequences of pelvic infection than with its prevention.<sup>2</sup> Infection with *Chlamydia trachomatis* may not be managed optimally in the gynaecological setting.<sup>3</sup>

Women are referred to gynaecologists with complications and symptoms of current infection. Cervicitis and endometritis cause post-coital and inter-menstrual bleeding and menorrhagia. Pelvic inflammatory disease (PID) causes tubal factor infertility. Chronic pain and dyspareunia account for large numbers of outpatient attendances and an eight-fold increase in hysterectomy rate. Fertility is six times more likely to be impaired in women who have had chlamydial PID than those with non-STI associated PID.<sup>4</sup> Following one or more episodes of PID there is a tenfold increase in the likelihood of ectopic pregnancy.<sup>5</sup> Ectopic pregnancy accounted for 8.0% (22 of 261) deaths resulting from complications of pregnancy, puerperum and childbirth 1992-1997.<sup>6</sup>

Observational studies indicate a large reservoir of undiagnosed infection within the general population.<sup>7</sup> Women attend an obstetrics and gynaecological unit for reasons apparently unconnected with chlamydia. These consultations could be viewed as missed opportunities for finding chlamydia and preventing its sequelae.

It is reasonable to suggest that example and lead in the diagnosis and treatment of women with chlamydia could come from gynaecologists. This positive involvement

would seem a preferable approach to one led by fear of litigation.<sup>8</sup>

During 10-year's testing in community family planning clinics<sup>9</sup> and termination of pregnancy services<sup>10</sup> we found it difficult to ensure consistent management of women testing positive. A centralised system and liaison with a designated health advisor improved matters.

### Methods

The study was conducted in Liverpool Women's Hospital from September 1997-September 1998. In-hospital research funding supported a clinical assistant and research nurse session per week for six of the 12 months.

*Chlamydia* testing was performed at Liverpool Public Health Laboratory Service (PHLS) by ELISA (Microtrak, Dade Behring). Reactive results were confirmed by fluorescence (Microtrak, Dade Behring) or PCR (Roche, Cobas).

A modified request form was designed by the researchers to enhance uniform data collection. Alongside demographic and departmental details, we recorded the reason for testing, symptoms, clinical signs and contraception.

*Chlamydia* swab results were copied to the research nurse and test initiator. Case notes were located for each woman with a positive result and it was established whether results were filed/signed, whether there was documentation of notification to patient or general practitioner (GP) about positive results, of treatment and mention of partners. Notes were examined 5 days, 1 week and 2 weeks after the result was issued. If no treatment had been initiated then the notes were brought to the attention of the test initiator.

### Results

Table 1 shows the number of attendances and tests from September 1997 – September 1998 in each department, together with positivity rates in those under and over 26 years of age.

Three departments taking most tests in relation to new patient attendance are colposcopy 367/1441(25.5%), emergency room 471/8435 (5.6%), and gynaecology outpatient department 309/6428 (4.8%). Although the highest percentage positivity was in gynaecology wards, numerically only four cases were found of 47 tested, whereas the colposcopy unit and the emergency room found larger numbers (13 and 18, respectively).

In the abortion unit there was no policy in place for *chlamydia* testing and no funding identified.

**Table 1** Positivity rates within departments

Department	New pts each dept 1997-1998	No of +ve Swabs. All Ages/No sent (%)	No of +ve Swabs. < 26 Years/No sent (%)	No of +ve Swabs. ≥ 26 years/No sent (%)
Antenatal clinic	5830	1/36 (2.8)	1/16 (6.2)	0/20 (0)
Day care abortion unit	3270	1/2 (50.0)	0/1 (0)	1/1 (100)
Colposcopy	1441	13/367 (3.5)	10/154 (6.5)	3/213 (1.4)
Gynaecology wards	7053	4/47 (8.5)	3/20 (15.0)	1/27 (3.7)
Emergency room	8435	18/471 (3.8)	14/220 (6.4)	4/251 (1.6)
Gynaecology out pt	6428	6/309 (1.9)	5/72 (6.9)	1/237 (0.4)
Delivery suite	6220	1/59 (1.7)	1/23 (4.3)	0/36 (0)
Maternity wards	7155	1/43 (2.3)	1/15 (6.7)	0/28 (0)
Reproductive medicine	630	0/12 (0)	0 (0)	0/12 (0)
Neonatal unit	601	0/8 (0)	N/A	0/8 (0)
Source not given		6/110 (5.4)	3/45 (6.7)	3/65 (4.6)
Total	33378	51/1464 (3.5)	38/566 (6.7)	13/898 (1.4)

In those over 26 years old, 898 tests were taken but only 18 of these screened positive. This is consistent with low positivity in older women found in all studies and it may be difficult to justify the cost of non-diagnostic testing for a low prevalence group. As in all studies, it is the lower age groups that show greatest positivity.

#### Management of those testing positive

The most common management of those testing positive was to copy the results to the GP. Staff in the emergency department adhered to this practice unless the patient was due a return visit.

In other departments the management was diverse. Three members of the colposcopy staff were the only staff to invite women back to discuss results, discuss referral to genitourinary medicine (GUM), or treat and arrange partner notification on site.

Of 34 patients with positive *Chlamydia* test results in the first 6 months and whose management route was monitored, positive results for 18 (52.9%) were sent to the patient's GP, four (11.8%) patients were sent a letter informing them of the result and advising they visit their GP, and 11 (32.3%) patients were given their results at a subsequent appointment. Two patients were not followed-up.

Of the documented management, 15 (44.1%) of 34 patients were informed of the need for partner notification, 14 (41.1%) were referred to GUM and 10 (29.4%) were advised about avoidance of sexual intercourse until both her and partner were treated. Thirteen patients had received appropriate antibiotics at the consultation as the swab was taken, but were not informed of their positive result or the need for partner notification to avoid risk of re-infection.

#### Discussion and suggestions

It is apparent that within this women's health care setting there is no overall policy relating to the taking of chlamydia tests and no protocol for management of those who test positive. It is undoubtedly the responsibility of the person initiating the test (or delegated colleague) to ensure that correct management is implemented if it is positive. This review demonstrated the inherent difficulties, which must be shared with similar services with diverse subspecialties.

There are two ways to help improve matters:

- Adequate documentation is important. We developed a checklist (Figure 1), which would lead to enhanced case note documentation useful for risk management. This checklist could be incorporated into the test result issued from the laboratory. If the results were then forwarded to the patient's GP, this checklist could be used in primary care.
- A second improvement may be a centralised system for

**Figure 1** Checklist for the management of chlamydia

POSITIVE CHLAMYDIA RESULT please tick where action has been taken

Name of patient \_\_\_\_\_

Date of test \_\_\_\_\_

\_\_\_\_\_ Patient notified of result (within 2 weeks) even if treatment been given already. Specify whether by phone, letter etc \_\_\_\_\_

\_\_\_\_\_ Information verbal/written about *Chlamydia*

\_\_\_\_\_ Antibiotics given or patient referred elsewhere for treatment

\_\_\_\_\_ Importance of treatment of partner discussed

\_\_\_\_\_ Importance of no sex until both cured

\_\_\_\_\_ Referral letter to Department of GUM

\_\_\_\_\_ Two timetables for GUM, one of which for partner

Signature \_\_\_\_\_ Date \_\_\_\_\_

the overview of positive results, responsibility for follow-up and treatment, which is clearly defined and effective. This could incorporate a health adviser role within the gynaecological department.

#### Conclusion

In a diverse service, it is difficult to manage women with positive chlamydia tests consistently, effectively and with adequate documentation. A checklist for management is one way to improve matters. A centralised system for overview of positive results combined with a health adviser role is one we would recommend for consideration.

As 70–80% of chlamydia is asymptomatic, gynaecology departments should consider their role in prevention of its sequelae.

#### Statements on funding and competing interests

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**Competing interest.** None.

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