ORIGINAL ARTICLE

Opportunistic screening for genital *Chlamydia trachomatis* infection and partner follow-up in family planning clinics in three Scottish cities

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Abstract

Three large urban family planning clinics (FPCs) in Scotland participated in a study to examine the implications of opportunistically offering urine testing for genital Chlamydia trachomatis *infection and FPC follow-up of positive women and of their male partners. Ninety-eight percent (3029) of women accepted the test. The prevalence of infection was 5.2% and this decreased significantly with age. There was no significant difference in prevalence between centres. Ninety-one percent of positive women intended to inform at least one partner about their infection status. Pretest counselling took about 10 minutes per woman while management (excluding full screening for sexually transmitted infections) of positive women took an additional 10 minutes. Screening in the FPC is acceptable to many women and to some of their male partners. Training and resources for administration and staffing are required if opportunistic screening is to be implemented.*

Key message points

- **Opportunistic testing for genital *Chlamydia trachomatis* infection is acceptable to the majority of women who attend family planning clinics.**
- **A small minority of women remains reluctant to be tested: this issue needs to be addressed.**
- **Additional resources are required to implement the full range of sources for opportunistic testing.**
- **Women who have the infection find it hard to discuss this with their male partners.**
- **'Unisex' clinics where men as well as women can discuss sexual health matters should be promoted.**

Introduction

The advent of nucleic acid amplification (NAA) tests for genital *Chlamydia trachomatis* infection, more sensitive than tests previously used and which can be used on urine samples, allows diagnosis of this often-asymptomatic infection. Opportunistic testing of women has been recommended to reduce the burden of long-term morbidity.[1,2]

This study aimed to determine the prevalence of genital *C. trachomatis* infection in women attending urban family planning clinics (FPCs) in Scotland and the implications of opportunistically offering urine testing and follow-up in the FPC to women attending, and to their male partners if acceptable.

Method

A random sample of women attending FPCs in Glasgow, Edinburgh and Aberdeen between November 2000 and June 2001 were invited by research nurses to consent to take part in the study. At each centre the recruitment target was an unbiased sample of 250 women aged <20, 20–24, 25–29 and ≥29 years. Sexual behaviour information was provided anonymously, a first void specimen of urine for testing was obtained and an anonymous study proforma completed. Women received their usual clinical care in the clinic. If an endocervical swab was taken in the course of routine clinical care (screening or symptomatology) a first-void urine was not obtained.

Laboratory testing was performed using the LCx probe system (Abbot Diagnostics Maidenhead, UK) (Glasgow and Edinburgh FPCs) and the Probetec *Chlamydia trachomatis* amplified DNA assay (Becton Dickinson, Oxford, UK) (Aberdeen FPC) according to the manufacturers' instructions.

As is normal clinical practice, women were informed of the test result. Up to three reminders were sent to those with positive tests to tell them of the need for further advice, treatment and partner follow-up, the latter being available at the FPC if requested. Women with positive tests and attending partners were counselled and treated with azithromycin 1 g stat. Partners were also offered a urine test. The women provided information about treatment of other partners elsewhere.

All variables collected were examined as potential risk factors for infection by univariate logistic regression. Those factors found significant were then examined in a multivariate logistic regression. Analyses were performed using the Statistical Products and Software Solutions (SPSS, Chicago, IL, USA).

Ethical committees' approval was obtained for the study.

Results

Ninety-eight percent (3029/3094) of women accepted the test. Refusal rates were similar and low in all age groups. Reasons given for refusal included: self-perception of low risk because of steady relationship or no current partner, recent/previous chlamydia test, unwilling to give urine specimen at this appointment, and upset because of positive pregnancy test.

Table 1 *Risk factors for genital chlamydia infection: results of multivariate logistic regression analysis*

Variable	Positive?			Prevalence	p[a]
	No	Yes	n	(%)	
Centre					
Glasgow	988	61	1049	5.8	0.43
Edinburgh	957	54	1011	5.3	
Aberdeen	925	44	969	4.5	
Age group (years)					
<20	659	71	730	9.7	**<0.0001**
20–24	777	58	835	6.9	
25–29	716	19	735	2.6	
≥29	718	11	729	1.5	
Marital status					
Married (ongoing)	346	6	352	1.7	**0.004**
Cohabiting	752	32	784	4.1	
Married and separated	67	4	71	5.6	
Widowed/divorced	64	3	67	4.5	
Single	1368	94	1462	6.4	
Current contraception					
None	220	10	230	4.3	0.9
Condom	1568	89	1657	5.4	
Pill	1509	82	1591	5.2	
Other	522	28	550	5.1	
Antibiotic use (previous 4 weeks)					
Yes	149	8	157	5.1	0.56
No	2722	151	2872	5.3	
'Ever treated for STI'					
Yes	334	14	348	4.0	0.29
No/Not known	2369	134	2369	5.7	
'Ever been to GUM/STD'					
Yes	331	12	343	3.5	0.13
No/Not known	2377	136	2513	5.4	
Current steady partner					
Yes	2285	119	2404	5.0	0.15
No/Not known	585	40	625	6.4	
Use condom with steady partner					
Never	781	41	822	5.0	0.49
Always	452	19	471	4.0	
Sometimes	1041	60	1101	5.4	
Number of partners in last year					
None	1168	46	1214	3.8	**<0.0001**
1–2	243	55	298	18.5	
3+	199	28	227	12.3	
Reason for attending FPC					
Contraception	1497	63	1560	4.0	**0.022**
Emergency contraception	331	22	353	6.2	
Other	516	36	552	6.5	
Pregnancy	526	38	564	6.7	
Signs/symptoms of genital infection					
No	2526	128	2654	4.8	**0.005**
Yes	344	31	375	8.3	

[a]The figures in bold indicate statistical significance.
FPC, family planning clinic; GUM, genitourinary medicine clinic; STD, sexually transmitted disease clinic; STI, sexually transmitted infection.

The prevalence of infection was 5.2% (159/3029) overall and decreased with age (p<0.0001) (Table 1). There was no significant difference in prevalence between centres. Significant differences in prevalence of infection (p<0.05) were also found by marital status, number of partners in last year, reason for attending the FPC, and signs/symptoms of genital infection.

Ninety-one percent (145/159) of positive women returned to the clinic for care. Of these, 91% (132/145) were intending to inform at least one partner of their infection status; women were less willing to inform previous partners. Only 57% (83/145) of women were screened for sexually transmitted infections (STIs) in the clinic and no woman was found to have an STI.

Eighty 'first-mentioned' partners of the 159 positive women (50%) were reported to have been treated for genital chlamydia infection. A total of 33 partners attended the FPC, 24 accepted a urine test and 14 tested positive.

The research nurses reported that pretest counselling and screening of the women took 10 minutes per woman on average and that counselling and management of a positive woman took 10 minutes. The latter estimate does not include time for STI screening of positive women or partner counselling and treatment.

Discussion

The very high acceptance rate demonstrates the acceptability of opportunistic testing in the FPC setting. The overall prevalence of 5.2% is comparable with recently published Scottish data based on NNA tests.[3,4]

The reasons given by women for refusing the offer of a test and their unwillingness to inform all partners demonstrated that much work remains to be done to inform women and men about genital chlamydia and to help them act to protect themselves from the infection and its sequelae. There is also strong support for the argument that men should be screened,[5] especially in view of women's reluctance to inform previous partners of their infection and the high proportion of male partners who were tested at the FPC and found to be positive.

FPC staff members already have skills in sexual behaviour counselling and in gynaecology. It is also encouraging that some male partners are willing to be treated in these clinics. The notion of 'unisex' care is an attractive one with the added benefit of shared sexual health responsibility.

Opportunistic screening in the FPC for genital *C. trachomatis* infection in women and their partners can be feasible and effective only if there are additional resources for staff training and for counselling, for treatments, and for screening for and management of STI. The advent of integrated family planning and genitourinary medicine services will facilitate opportunistic testing of females and males within the same health care location.

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