

Lesbians and cervical screening

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SUMMARY

Confusion exists in clinical practice about whether lesbians should be offered routine cervical smears. We found cervical smear abnormalities in a sample of 624 lesbians, including those who had never been sexually active with men. These findings suggest that lesbians should be routinely offered cervical cytology as part of the national screening programme. Evidence of human papilloma virus (HPV) infection in the 'exclusively lesbian' group indicates that sexual transmission of HPV may occur between women. The belief by some lesbians that they have less need for cervical smears, coupled with poor uptake of cervical screening by a significant proportion, demonstrates a need for education of lesbians and health service providers.

Keywords: lesbians; human papilloma virus; cervical screening; cervical cytology; cervical dyskaryosis.

Introduction

It is a commonly held belief that lesbians do not require cervical screening, regardless of their sexual histories. Studies, particularly from the United States, have described lesbians' fear of unsympathetic health services,¹ and consequent reluctance to obtain health care,²⁻⁴ reflected in a lower uptake of cervical cytology in comparison with heterosexual women.^{5,6} Abnormal cervical cytology in lesbians has been described; however, studies relied on self-report⁷⁻⁹ or did not control for heterosexual activity.^{5,10,11} Two case reports^{12,13} described cervical human papilloma virus (HPV) infection in lesbians who gave no history of sexual activity with men.

We present to our knowledge the largest systematic study of cervical cytology using confirmed laboratory diagnoses among lesbians in the United Kingdom (UK).

Method

A self-administered questionnaire was offered to all women at their initial presentation at two London lesbian sexual health clinics held within departments of genitourinary medicine. All subjects reported current or prior sexual activity with women.

Details of past sexual history, sexual practices, self-reported cervical cytology history, smoking history, and beliefs about the

need for cervical screening were obtained from questionnaire responses. Cytology results were obtained from case notes. Subjects were designated 'exclusively lesbian' if they had no history of sexual intercourse with a man (including child sexual abuse or forced vaginal penetration).

Chi-square contingency table analysis was performed using SPSS software, version 6.1 (SPSS Inc, Chicago, IL).

Subjects

Eight hundred and three women completed a questionnaire and cervical cytology was performed in 624 cases. Eighteen women were excluded because of inadequate cytology samples or incomplete questionnaires, leaving 606 women eligible to enter the study. Four hundred and eighty-five (80%) women had heterosexual histories and 121 (20%) were 'exclusively lesbian'.

The mean age was 31 years (range 19 to 69). The 'exclusively lesbian' group was significantly younger (mean 29.3 versus 31.5 years, $P < 0.001$). The majority of the sample were white (539 [89%]). Ethnicity, employment status, and smoking habits were not significantly different between the two groups.

Results

Of the 606 subjects, cytological changes consistent with moderate or severe dyskaryosis were noted in five (0.83%) (Table 1). No woman in this series had cytological results suggestive of invasive neoplasia. Cytological abnormalities (borderline, mild, moderate or severe dyskaryosis) were significantly more common in women who had been sexually active with men than in 'exclusively lesbian' subjects; 53 (10.9%) compared with six (4.9%) ($P < 0.05$, odds ratio = 2.35, confidence interval = 0.98 to 5.56). These results become more significant when standardised for age ($P < 0.04$).

Cervical cytology results consistent with the presence of HPV infection were found in 20/603 (3.3%) of the sample. Only two (1.7%) of the 'exclusively lesbian' group showed these changes compared with 18 (3.7%) women with heterosexual experience; however, this difference was not significant.

Risks factors for cervical smear abnormalities

Among subjects who had been heterosexually active, 39% (178/453) reported six or more lifetime male partners. For 50% (241/485), the most recent sexual activity with men was over six years ago. Seven per cent (34/485) had been heterosexually active in the last year. The age of first sexual intercourse with a man was reported as below 16 years by 26% (117/457).

Fifty-six per cent (332/594) of subjects reported six or more lifetime female partners. The age of first sexual experience with a woman was reported as below 16 years by 9% (55/601); most (51% [306/601]) had first woman-to-woman sexual contact aged 21 years or over.

The majority of the sample, (62% [368/592]) were non-smokers. Twenty per cent (118/592) were currently smoking more than 10 cigarettes a day.

None of the risk factors described (numbers of male and female sexual partners, age of first sexual contact, smoking) were statistically associated with cervical cytological abnormality. For the results reported above, the denominator excludes those who did not answer the question.

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Table 1. Cervical cytology results.

Cervical smear result	Total sample (%) (n = 606)	Sexual activity with men (%) (n = 485)	'Exclusively lesbian' (%) (n = 121)
Negative	547 (90.3)	432 (89.1)	115 (95)
Borderline	49 (8.1)	44 (9.1)	5 (4.1)
Mild dyskaryosis	5 (0.8)	4 (0.8)	1 (0.8)
Moderate dyskaryosis	1 (0.2)	1 (0.2)	0 (0)
Severe dyskaryosis	4 (0.7)	4 (0.8)	0 (0)

Time since last cervical smear

Seventeen per cent (90/524) of subjects reported no prior cervical smear (the denominator excludes those aged under 25 years to allow time for response to health authority cervical smear invitations). Three hundred and one (57%) reported having had a cervical smear within the last three years and 133 (25%) over four years ago. More of the 'exclusively lesbian' group had never had a cervical smear than those who had been sexually active with men (42% versus 12%, $P < 0.001$).

Perceived need for cervical screening

The majority of responders (449/602 [75%]) perceived their need for cervical screening to be equivalent to that of heterosexual women; however, 135 (22%) felt that they had less need for cervical smear testing than heterosexual women and this belief was significantly more prevalent in the 'exclusively lesbian' group (41% versus 19%, $P < 0.001$). Beliefs about need for cervical cytology were highly correlated with screening behaviour (Mantel-Haenszel test for linear association = < 0.001).

Discussion

Early age of first intercourse with a man, number of male partners, smoking, and the presence of cervical HPV infection are all acknowledged factors associated with cervical pre-malignant and malignant change. On these criteria, the group of lesbians described are potentially at risk of cervical cancer.

Regarding HPV infection in 'exclusively lesbian' women, O'Hanlan¹³ speculates that HPV may be transmitted through oral sex between women, or that infection may rarely be acquired congenitally. HPV DNA has been noted on fomites¹⁴ and Ferris *et al*¹² suggest that the sharing of sex toys with vaginal penetration of both female partners may also be a mode of transmission. The two women with cervical HPV changes who reported exclusively lesbian sexual contact gave histories of both oral-genital contact, genital-genital contact, and the sharing of sex toys. One gave a history of vaginal penetration with fingers. Data based on sexual history suffers from being unverifiable, but it seems biologically plausible that HPV could be passed from woman to woman in sexual contact, though less efficiently than through heterosexual intercourse.

The use of cervical cytological change as a marker for HPV infection is an insensitive tool and our results will therefore lead to an underestimate of the true prevalence. The detection of HPV DNA using polymerase chain reaction techniques would help to establish true prevalence and to determine whether oncogenic strains of cervical HPV are detected among lesbians. Epidemiological studies could determine correlations between cervical dyskaryosis or HPV infection and numbers of female sexual partners, or age of first female sexual contact. Studies of female sexual partners using HPV DNA typing may help to elucidate whether HPV can be sexually transmitted between

women.

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