Correspondence

Letters should not exceed 400 words and should be typed double spaced (including the references) and be signed by all authors

TO THE EDITOR, *Genitourinary Medicine*

Genital herpes diagnosed by cervical cytology

Sir,

The cervix is commonly affected by first attacks of genital herpes, but much less often by recurrences.¹ The definitive method of diagnosing genital herpes is by growing the virus in tissue culture.² Cells obtained from the cervix by exfoliative cytology, however, may show changes characteristic of herpes simplex virus (HSV) infection. These features consist of the homogenisation of nuclear contents, margination of chromatin leading to a "ground glass" appearance, multinucleation leading to the formation of giant cells, and the presence of intranuclear eosinophilic inclusions.³ HSV infection is only rarely detected on cervical cytology. A study in Atlanta, United States of America, showed features of HSV in only 0.16% of 40 000 smears,³ and a similar result was obtained in an analysis of over 57 000 cervical smears in Finland.⁴

We carried out this study to assess the clinical characteristics of patients in whom HSV was detected on routine cervical cytology. The case notes of all women attending the department of genitourinary medicine at the Middlesex Hospital during a two year period whose cervical smears showed changes characteristic of HSV were analysed retrospectively. We noted any history of genital herpes and the presence of herpetic lesions and of any coexisting sexually transmitted disease (STD). Differences were compared using Fisher's exact test.

We found 30 women with genital herpes. In 21 it was suspected at the initial visit, material for viral culture was obtained from the cervix of 20 of them, and all cultures gave positive results. In the remaining nine women genital herpes was not suspected, and viral cultures had not been performed at the initial clinic visit. Material for viral cultures was obtained two weeks later from five, and all gave negative results. Sixteen of the 30 women had one or more genital infection in addition to HSV. The cervixes appeared abnormal in 19 (63%) of the women, although the appearances in women in whom herpes was suspected were similar to the appearances in women in whom it was not suspected (table).

Table Appearance of cervixes of 30 women infected with herpes simplex virus (HSV) (figures are numbers (percentages) of women with given abnormality)

Abnormality	HSV suspected (n = 21)	HSV not suspected (n = 9)
Cervicitis	10 (48)	5 (56)
Ulceration	3 (14)	0
Necrosis	1 (5)	0
Total	14 (67)	5 (56)
Infected with other organisms*	11 (53)	5 (56)

*These comprised: *Trichomonas vaginalis*, *Neisseria gonorrhoeae*, human papillomavirus, *Chlamydia trachomatis*, *Candida albicans*, and *Gardnerella vaginalis*. Several patients had multiple infections.
Note: No significant differences were seen between the two groups.

In cases where genital herpes is suspected the detection of changes suggestive of herpes on cervical cytology does not pose a problem. When genital herpes is not suspected but cytology results suggest HSV infection, however, the clinician is faced with several problems, including what to tell the patient and how to confirm the diagnosis. We suggest that the patient be recalled as soon as possible and told that there are non-specific changes on her cervical smear. A careful history should be taken for symptoms suggestive of previous episodes of genital herpes, and material for viral cultures taken from the cervix and any other suspect sites. Screening for other STDs should be performed if this had not been carried out at the initial clinic visit. Unfortunately, as the results of cervical cytology are not usually available for several weeks, confirmation by a positive viral culture result will seldom be achieved. Conversely, a negative cervical culture result will not exclude genital herpes.

If a woman gives a history indicative of genital herpes, she should be asked to return immediately for repeat viral cultures if she experiences further symptoms. In the absence of such a history it is pointless to repeat viral cultures at random as these are unlikely to be positive. Nor could the doctor, if he told her his provisional diagnosis, counsel the woman how to prevent transmission to her sexual partner effectively.

Regular and indefinite use of condoms would not be acceptable to most women, especially when the diagnosis is not certain.

Yours faithfully,

K W Radcliffe

A Mindel

Academic Department of Genitourinary Medicine,
James Pringle House,
Middlesex Hospital,
London W1N 8AA

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TO THE EDITOR, *Genitourinary Medicine*

Topical anthelmintic treatment of recurrent genitourinary enterobiasis

Sir,

The vagina, uterus, fallopian tubes, peritoneum, and surfaces of the ovaries are common sites of extraintestinal enterobiasis, which rarely affects the ovarian and renal parenchyma.^{1,2} Chronic enterobiasis of the urinary tract with related clinical manifestations is rare.³ We encountered an interesting case of chronic genitourinary oxyuriasis that lasted for more than 18 months. A married, fertile, Moslem woman aged 20 attended complaining of burning on micturition and crawling sensations in her vagina and urethra. Examination of her catheteric urine showed profuse pyuria, but no casts or erythrocytes. Ova and larvae of *Enterobius vermicularis* were, however, repeatedly found in her urine and vaginal discharge. She had received various systemic and oral regimens of antimicrobials and anthelmintics.

Correspondence

tics without improvement. We treated her successfully with local applications of piperazine solution for only eight days, and more than 18 months elapsed since without any recurrence. In chronic cases of sterile pyuria, therefore, urine should be examined for parasites. If the ova or larvae of *E. vermicularis* are found treatment should be by local irrigation of the urethra and bladder and vaginal application of piperazine salts.

The most probable source of repeated urinary tract infections in our patient was the vagina and not the intestinal tract. This explanation is based on three observations: (1) stools and perianal swabs from her and her husband were repeatedly negative for *E. vermicularis*, (2) her condition responded to topical vaginal treatment, and (3) no antimicrobial or other drug was required to treat this condition.

Yours faithfully,
Sarman Singh
J C Samantaray

Section of Parasitology,
Department of Medical Microbiology,
All India Institute of Medical Sciences,
New Delhi 110 029, India

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TO THE EDITOR, *Genitourinary Medicine*

Importance of *Gardnerella vaginalis* as an aetiological agent in bacterial vaginosis

Sir,
Ching *et al* have reported that using the PEM-GVA (plastic envelope method) *Gardnerella vaginalis* was isolated from 47 of 49 (96%) of women with clinical bacterial vaginosis (BV).¹ The PEM broth medium showed an adherence of *G vaginalis* bacteria in 75% of these patients.

Using the PEM-GVA test, we undertook a study specifically directed at further investigating the in vitro adherence of *G vaginalis* in patients with symptomatic BV. We studied 103 consecutive women attending a local health clinic. We compared the results of pelvic examinations with results of the PEM-GVA and conventional techniques.¹⁻³

Table 1 shows that *G vaginalis* was isolated

Table 1 Isolation of *Gardnerella vaginalis* from 19 women with and 84 without bacterial vaginosis (BV) (figures are numbers (percentages) of women yielding *G vaginalis*)

Category	No	PEM-GVA	Conventional culture
BV	19	19 (100)	16 (84.2)
Non-BV	84	18 (21.4)	18 (21.4)
Totals	103	37	34

from 19 (100%) women with BV and 18 (21.4%) of the remaining 84 patients, who did not have BV. Appreciable adherence, as shown in table 2, occurred in 18 (95%) of the 19 women with BV and five (6%) of the 84 other patients ($p < 0.0001$). Table 3 shows that appreciable numbers of clue cells were found in 16 (84%) of the 19 women with BV, and four (5%) of the 84 other patients ($p < 0.0001$). When appreciable bacterial adherence and clue cells were absent, results correlated best with a BV negative predictive value of 98%.

A previously unreported observation was used in this study as a possible indicator of BV, namely the presence of gas bubbles in a patient's discharge. It was present in all the positive symptomatic confirmed cases.

In vivo adhesion of *G vaginalis* to epithelial cells may be important in the pathogenesis of BV.⁴ Whether any relation exists between the in vivo and in vitro adherence described previously is speculative. The results of this study, however, indicate that the PEM-GVA provides a rapid, sensitive, and specific method of growing *G vaginalis*.

Table 2 Adherence density of *Gardnerella vaginalis* in 103 women

Adherence density	BV	Non-BV
4+	14	1
3+	4	4
2+	1	5
1+	0	3
None	9	71
Total	19	84

Appreciable densities were 3+ and 4+.

Table 3 Clue cell density in 103 women

Clue cell density	BV	Non-BV
4+	10	0
3+	6	4
2+	2	4
1+	1	7
None	0	69
Total	19	84

Appreciable densities were 3+ and 4+.

This system also presents the microscopic visualisation of bacterial adherence and clue cells that correlate significantly with the clinical diagnosis of BV.

Yours faithfully,
K A Borchardt*
B S Adly*
R F Smith†
J Eapen‡
C B Beal‡

*Center for Advanced Medical Technology, San Francisco State University, San Francisco,

†Contra Costa County Health Department, Martinez,

‡International Health Services, East Palo Alto, California, USA

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TO THE EDITOR, *Genitourinary Medicine*

Acute urethritis due to *Neisseria meningitidis* group A acquired by oro-genital contact: case report

Sir,
Following the recent report of urethritis due to *Neisseria meningitidis*, acquired from heterosexual oro-genital contact,¹ we wish to report a similar case. A 16 year old school-boy was referred by his GP in January 1989. He gave a history of pain in the left iliac fossa radiating to the groin for one day. He denied any urethral symptoms, and maintained that he had never had sexual intercourse. There was no significant past medical history. On examination he had a tender swelling adjacent to the left testicle and a profuse purulent urethral discharge. Gram negative intracellular diplococci were present on urethral smear.

A presumptive diagnosis of gonococcal urethritis and epididymitis was made and he was treated with 2 g intramuscular spectinomycin and a two-week course of doxycy-