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 parianal 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,
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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 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%.

Table 1 *Isolation of Gardnerella vaginalis from 19 women with and 84 without bacterial vaginalis (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

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,
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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 schoolboy 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-