

Correspondence

TO THE EDITOR, *Genitourinary Medicine*

Culture of *Candida albicans* on gonococcal and Sabouraud's media correlated with presence or absence of signs or symptoms and positive results on microscopy and cytology

Sir,

We diagnose about 1000 cases of gonorrhoea a year in women using a selective medium (Oxoid Columbia agar base (CM331) with 50 ml freeze-lysed horse blood containing vancomycin 1.2 mg, colistin 7500 units, and trimethoprim 3 mg/l (VCT)). Although theoretically one might expect candidae to suppress the growth of gonococci, we were unable to show any appreciable excess of slide positive culture negative patients in whom yeasts were identified during one year's use of the medium.

It then remained for us to show that we could save the additional cost of a yeast selective medium by relying solely on the incidental information obtained from urethral and cervical cultures on the gonococcal selective medium. We examined patients presenting to the clinic with new complaints, excluding from the study those who were pregnant or menstruating, because of the difficulty of assessing clinical signs in such women. In addition to the routine history and examination, particular note was taken of a history of vaginal discharge,

vulval and urinary symptoms, and undoubtedly abnormal local redness or a "thrush like" discharge on clinical examination. Preselected descriptive terms were used to minimise the intrusion of clinical opinion into the recorded details.

Chlamydial cultures were not available to us, but the following tests were taken according to normal routine: cervical cytology; Gram stained smears from the cervix, urethra, and vagina; wet film and amine test from the vagina; specimens from the urethra, cervix, rectum, and vagina plated direct on to gonococcal selective medium; specimens from the vagina transferred direct into trichomonal medium and on to modified Sabouraud's medium (Sabouraud dextrose agar (CM41) with 50 mg chloramphenicol/l); and serological tests for syphilis. Germ tube formation was used as the provisional means of identifying *Candida albicans*, but treatment was given, where feasible, to all patients from whom yeasts were isolated.

The numbers were small but yielded some interesting findings (table). Other genital infections were identified in 77 patients and 100 yielded only yeasts. The latter group was subdivided by the presence or absence of signs or symptoms, or both. Three of the patients with other infections and 15 of those with yeasts alone had taken antibiotics within the month before presentation to the clinic. At first sight, the overall isolation rate on gonococcal medium from the

urethra or cervix (153/177 (86%)) appears unfavourable in comparison with that from the vagina on Sabouraud's medium (171/177 (97%)). However, in those with symptomatic yeast infections the figures were 96% (78/81) and 95% (77/81) respectively. In addition, there were differences in the isolation rates on the less sensitive medium, which provide indirect evidence of the numbers of organisms concerned and their relative pathogenic roles in symptomatic and asymptomatic patients. The germ tube test was not clinically useful in this study in that there were patients with undoubtedly severe clinical thrush from whom germ tube negative strains were isolated.

Your faithfully,

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TO THE EDITOR, *Genitourinary Medicine*

Diagnostic facilities for *Chlamydia trachomatis* in men

Sir,

There has been considerable debate among genitourinary physicians and directors of microbiology services relating to the diagnosis of non-specific anterior urethritis in men. Permanent tissue damage in the female partners of men at risk of sexually transmitted disease may be related to the absence of diagnostic facilities to identify *Chlamydia trachomatis* by culture or an alternative reliable method.

To clarify this situation we looked at a series of 60 consecutive male patients who were *Chlamydia* positive by McCoy cell isolation. Nine of these 60 men were totally asymptomatic. An unexpectedly high number, 18 (30%), had only ≤ 8 polymorphonuclear leucocytes (PMN) per high power field, and 10 had ≤ 4 PMN/field.

The diagnostic criterion of chlamydial infection used by most clinics in the United Kingdom is >5 PMN/field.¹ This is also advocated by the World Health Organisation.² Applying accepted diagnostic criteria to our own known cases of chlamydial urethritis in men, one in six active patients with chlamydial urethritis would remain undiagnosed and untreated, and their sexual partners left at risk of

TABLE Results of diagnostic tests for *Candida albicans* in 177 patients

Tests positive for yeasts	No (%) with other infections (n = 77)	No (%) yielding cultures of yeasts only (n = 100)				Symptoms versus no symptoms
		Symptoms and signs (n = 48)	Symptoms only (n = 33)	Signs only (n = 6)	Neither (n = 13)	
Slide or cytology (n = 74)	19 (25)	29 (60)	19 (58)	5 (83)	2 (15)	
Vaginal cultures on Sabouraud medium (n = 171)	76 (99)	46 (96)	31 (94)	5 (83)	13 (100)	
Urethral cultures on VCT (n = 100)	57 (74)	43 (90)	28 (85)	3 (50)	9 (69)	p<0.05
Cervical cultures on VCT (n = 133)	52 (68)	39 (81)	29 (88)	4 (67)	9 (69)	
Vaginal cultures on VCT (n = 145)	57 (74)	44 (92)	32 (97)	3 (50)	9 (69)	p<0.001
Urethral or cervical cultures (n = 153)	62 (81)	45 (94)	33 (100)	4 (67)	9 (69)	p<0.001
Urethral, cervical, or vaginal cultures (n = 158)	66 (86)	46 (96)	33 (100)	4 (67)	9 (69)	p<0.001

VCT = selective medium containing vancomycin, colistin, and trimethoprim.

ascending genital tract infection and its permanent sequelae. If the partners were pregnant, there would also be risk of neonatal infection.

This small study has caused concern as (a) it reinforces the problem of the asymptomatic shedder of *Chlamydia trachomatis* in the male population (about 15% in this series), and (b) if these data are reproducible, on the first attendance as many as 16% of male patients may have this common and potentially serious sexually transmitted disease, which is missed by conventional diagnostic methods. The above results suggest that 30% of infected men would be missed in departments that use >10 PML/field,² although the two glass urine test may identify some of these cases.

The journal has, over the years, paid much attention to the diagnosis of non-specific urethritis in men. We wonder whether looking at isolation positive cases and referring back to microscopy may be of interest to our colleagues, and in particular ask whether colleagues with full chlamydial diagnostic services have made similar observations. Should the results of this study be supported by other centres, full diagnostic facilities should be made available urgently to all genitourinary departments as a matter of public health necessity. Failure to achieve early diagnosis in men means failure to prevent female tubal occlusive infertility, ectopic pregnancy, chronic pelvic pain, and avoidable neonatal disease.

Yours faithfully,

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References

1. Adler MW. Diagnostic, treatment, and reporting criteria for non-specific genital infection in sexually transmitted disease clinics in England and Wales. 1: Diagnosis. *British Journal of Venereal Diseases* 1978; **54**:422-7.
2. World Health Organisation. Non-gonococcal urethritis and other selective sexually transmitted disease of public health importance. Non-gonococcal urethritis — definition and diagnosis 11-1. *WHO Tech Rep Ser* 1981:59.

TO THE EDITOR, *Genitourinary Medicine*

Indigenous intravaginal pentatrichomonads vitiate the usefulness of squirrel monkeys (*Saimiri sciureus*) as models for trichomoniasis in men

Sir,
After Street, Taylor-Robinson, and Hetherington proposed the squirrel monkey

as a model for the study of human trichomoniasis,¹ we obtained two young adult female squirrel monkeys from a commercial supplier. Unfortunately they were already infected with intravaginal trichomonads. Protozoa were regularly obtained by syringing the vaginas with a small amount of serum saline, and identified by dark field illumination. Isolates were readily grown in our modification of Diamond's medium.²

Study of the trichomonads in cooled wet preparations and in fixed silver stained smears showed five anterior flagella distributed in the "4 + 1" arrangement characteristic of the genus *Pentatrichomonas*, as described by Honigberg.³ Other workers including Wenrich have found similar trichomonads in the vaginas and intestines of Rhesus monkeys.⁴

Because *Trichomonas* and *Pentatrichomonas* species are not easily distinguished, monkeys for trichomoniasis research need to be exhaustively examined for the presence of indigenous organisms. Naturally occurring infections can be eradicated by metronidazole, but as the immunological state could be altered by a new infection with trichomonas, we suggest that the squirrel monkey is not the ideal model for human trichomoniasis.

Yours faithfully,

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References

1. Street DA, Taylor-Robinson D, Hetherington M. Infection of female squirrel monkeys (*Saimiri sciureus*) with *Trichomonas vaginalis* as a model of trichomoniasis in women. *British Journal of Venereal Diseases* 1983; **59**:249-54.
2. Hollander DH. Colonial morphology of *Trichomonas vaginalis* in agar. *J Parasitol* 1976; **62**:826-8.
3. Honigberg BM. Evolutionary and systematic relationships in the flagellate order Trichomonadida Kirby. *J Protozool* 1963; **10**:20-63.
4. Wenrich DH. Morphology of the intestinal trichomonad flagellates in man and of similar forms in monkeys, cats, dogs, and rats. *J Morphol* 1944; **74**:189-211.

**Drs Taylor-Robinson, Street, and Hetherington reply below.—
ED, *Genitourin Med*.

TO THE EDITOR, *Genitourinary Medicine*

Sir,

The comments by Hollander and Gonder serve as a useful reminder that monkeys may be infested naturally in the vagina with trichomonads. However, the marmosets, tamarins, and squirrel monkeys that we used were not. As we pointed out previously,¹ three attempts to recover trichomonads from each of six squirrel monkeys before they were inoculated with *Trichomonas vaginalis* failed. Furthermore, trichomonads were not recovered from two of these monkeys after inoculation, despite 23 and 32 attempts respectively, or at any time from two squirrel monkeys that served as controls. The squirrel monkey may not be the ideal model for human trichomoniasis but it was the only one with which we had success. Obviously, an indigenous vaginal trichomonal infestation will vitiate the usefulness of any monkey in experiments of this kind. To be charitable, we shall assume that Hollander and Gonder were not implying on the basis of observations on two monkeys that such infestation was always likely to occur, for they were aware, of course, that it was not our experience. Finally, our observations indicated that immunity, at least to *T vaginalis*, developed only weakly so that, without testing the point, it may be premature to suggest that a squirrel monkey treated with metronidazole will not serve as an ideal model or, at least, a useful one.

Yours faithfully,

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References

1. Street DA, Taylor-Robinson D, Hetherington CM. Infection of female squirrel monkeys (*Saimiri sciureus*) with *Trichomonas vaginalis* as a model of trichomoniasis in women. *British Journal of Venereal Diseases* 1983; **59**:249-54.

TO THE EDITOR, *Genitourinary Medicine*

Tyson or not Tyson

Sir,
We report a case of gonococcal "tysonitis" in a man aged 35 who presented in March

Notices

Organisers of meetings who wish to insert notices should send details to the editor (address on the inside front cover) at least eight months before the date of the meeting or six months before the closing date for applications.

Second world congress on sexually transmitted diseases (STDs)

The second world congress on sexually transmitted diseases (STDs) will be held at the Centre International de Congres de Paris (CIP), Porte Maillot, Paris, from 25 to 29 June 1986 under the patronage of the World Health Organisation and the International Union against Venereal Diseases and the Treponematoses. The general theme will be "STDs and their social and economic consequences".

For further information concerning registration, travel arrangements, hotels, etc, please contact the Commissariat General, 4 Villa d'Orleans, 75014 Paris, France.

IUVDT—fourth regional meeting of the South East Asian and western Pacific region

The fourth regional meeting of the South East Asian and western Pacific region of the International Union against the Venereal Diseases and Treponematoses will be held in Bombay, India, from Friday 18 October to Sunday 20 October, 1985. The primary theme will be the complications of STD. Secondary themes will be: viral diseases and socioeconomic aspects of STD.

Further information can be obtained from: Dr J K Maniar, Organising Secretary, 69/51 Walkeshwar Road, Bombay-400 006, India.

Correction

Diagnostic facilities for *Chlamydia trachomatis* in men

We regret that an error occurred in this letter (June 1985; 61;211-2) from Dr G Sharmacharja. We omitted the name of the coauthor of the letter, Dr T R Moss, Consultant in Genitourinary Medicine, Doncaster Royal Infirmary, and Honorary Clinical Lecturer, University of Sheffield.