TO THE EDITOR, *Genitourinary Medicine*

Finger nails as a reservoir for *Candida albicans* in recurrence of vaginal candidosis

Sir,

Recurrent vaginal infections with *Candida albicans* remain a substantital clinical problem. Many explanations have been given for recurrence, including reinfection from an intestinal reservoir[1-3] or a sexual partner,[3 4] and hypersensitivity or other abnormalities of the local immune response to *C albicans*.[5-6]

As pruritus is a major symptom of Candidal vulvovaginitis, there has always been a conjectural possibility that the patient's finger nails, used to scratch the affected vulva, may act as a temporary reservoir of *C albicans* for reinfection. We recently obtained evidence of this route of reinfection in one patient in the course of a larger investigation, in which isolates of *C albicans* from multiple anatomical sites were identified by standard methods[7] and *C albicans* isolates were biotyped.[8 9]

The patient, a woman aged 40, first presented at the genitourinary medicine clinic of Leicester Royal Infirmary with signs and symptoms of vulvovaginal thrush. She had recieved a course of antibiotics two weeks previously and a course of metronidazole one week previously. Single swabs were taken from the vagina, urethra, anus, mouth, and finger nails (in the latter case one swab was rubbed sequentially beneath all ten nails), and were plated on Sabouraud dextrose agar (Oxoid). All the samples were positive for yeasts, with confluent growth obtained from the vaginal and urethral swabs and a single colony from the oral and nail swabs. The isolate from the finger nails was identified as *Trichosporon cutaneum*. Those from the other sites were all identified as *C albicans* biotype 117.

The patient was given a single 500 mg clotrimazole pessary and clotrimazole cream to be applied to the vulva daily. She returned for follow up seven days after the initial examination. On this occasion no yeasts were isolated from oral, anal, urethral, or vaginal swabs and the patient was free of symptoms. The swab from the finger nails, however, yielded three colonies of *C albicans* biotype 117. The patient was given a further seven day course of topical vaginal antifungal treatment. Two weeks later she returned to the clinic complaining of a recurrence of her symptoms of thrush. On this occasion the vaginal swab only was positive for yeasts — once again *C albicans* biotype 117 was isolated.

The pattern of transmission of the *C albicans* in this case seems to be clear, as in the period between recurrences only the finger nails were positive for *C albicans* and the biotype isolated from the finger nails had evidently replaced the previous yeast flora. The extra information given by the biotyping tests confirms that the recurrence was caused by the same strain of *C albicans* as before.

It should be pointed out that evidence of the type of transmission documented here is obtained only rarely even when a prospective survey of multiple sites for *C albicans* is undertaken, as it requires, among other things, reattendance of the patient at the clinic at the appropriate sample times, which is not always a matter within the control of the clinic. The overall carriage rate of yeasts under the finger nails of women in our larger survey (to be published elsewhere) is about 11%, with *C albicans* implicated in about a quarter of patients yielding yeasts. This carriage rate suggests that finger nail reservoirs of *C albicans* for vaginal reinfection occur rarely, but consideration of this possible route of reinfection may sometimes be useful in cases refractory to genital antifungal treatment.

Yours faithfully,

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TO THE EDITOR, *Genitourinary Medicine*

Cytomegalovirus infection in provincial homosexual men

Sir,

In a recent study conducted at a London sexually transmitted diseases (STD) clinic, serological evidence of cytomegalovirus (CMV) infection was found in almost all homosexual men tested.[1] Other viral STD, such as hepatitis B, have a lower prevalence in provincial homosexual men attending STD clinics than are reported from London.[2]

We studied the prevalence of prior CMV infection in 295 consecutive homosexual and bisexual men presenting to the department of genitourinary medicine in Sheffield. Serum was obtained at their presentation and tested for CMV antibodies by three methods: haemagglutination (Cetus Corporation of California), latex agglutination (CMV Scan, Becton & Dickinson), and an enzyme linked immunosorbent assay (ELISA) (CMV Antigen, Institute Virion). Patients were deemed to be seropositive if two or more tests gave positive results.

Two hundred and thirty two (78·6%) men were seropositive, the mean (SD) age of seropositive men was 31·9 (8·6) and mean number of sexual partners in the preceding three months was 2·5 (3·2). These values did not differ appreciably from those found in seronegative men. We found significant correlations between seropositivity and a history of gonorrhoea ($p=0·05$), hepatitis B ($p=0·05$), and genital warts ($p=0·05$), but no correlation with previous syphilis or non-specific genital infection (table).

This prevalence of CMV infection in our clinic population of provincial homosexual men was significantly less than that reported by Mindel and Sutherland, who found 93% of their 152 patients to be seropositive ($\chi^2=16$; $p<0·001$). This lower prevalence may relate to differences between the populations in terms of ethnic background (only seven (2·4%) of our patients were non-white) or sexual behaviour.

CMV infection may cause immune suppression and has been implicated in the acquired immune deficiency syndrome as a cofactor in the development of Kaposi's sarcoma[3] and major opportunistic infections. Geographical differences in the prevalence of