LETTERS TO THE EDITOR

Methicillin resistant *Staphylococcus aureus* (MRSA) balanoposthitis in an insulin dependent diabetic male

EDITOR,—Balanoposthitis is a common condition affecting 11% of the male attendees at GUM clinics.[1] It is an inflammation of the glans penis and the prepuce, and its causes include bacterial and yeast infections, parasitic infestations, trauma, and irritants.[2] However, to our knowledge, no case has been reported to be caused by MRSA.

A 49 year old insulin dependent diabetic man who was an inpatient for repair of an upper jaw fracture developed a penile itch with swollen foreskin, which was difficult to retract, together with longitudinal fissures on the prepuce and subpreputial discharge. In his recent past he had had two incidents of unprotected sexual intercourse with two known females. He was clinically diagnosed as having candida balanitis and was commenced on clotrimazole cream, which did not produce a clinical response over the course of a week. The swabs taken before the commencement of clotrimazole cream failed to grow candida; however, MRSA resistant to erythromycin, penicillin, and flucloxacillin but sensitive to mupirocin was isolated.

Screening tests for chlamydia, gonorrhoea, and trichomonas were negative.

A 10 day course of mupirocin 2% ointment completely resolved his symptoms.

Subpreputial swab after treatment was negative.

MRSA has been a well recognised cause of hospital acquired infections worldwide since it was first detected in Europe in the 1960s.[3] The organism can survive for long periods in both the hospital and the home environment and can colonise the skin, nose, or throat of patients and healthcare staff.[4] Several reports have suggested that diabetic patients are more susceptible to *Staphylococcus aureus* bacteraemia[5] MRSA has been isolated from different sites in diabetic patients but not the genitalia.[6] MRSA rarely invades intact skin; however, it can give rise to severe infections—for example, wound infection, bacteraemia, endocarditis, and osteomyelitis.[7]

This case illustrates the fact that MRSA is an organism to consider in patients who develop balanoposthitis while in hospital or shortly after discharge especially those whose immune system is incompetent.

There may be implications of spread of MRSA in the community for sexual contacts of patients carrying MRSA in the genital area.

Contributors: Both authors managed the patient and wrote the manuscript.

E HERIEKA
P FISK
Department of GUM, Leicester Royal Infirmary, Leicester LE1 5WW, UK

Correspondence to: Dr E Herieka
Bherieka@uhl.trent.nhs.uk

1 Edwards S. Balanitis and balanoposthitis: a review. *Genitourin Med* 1996;**72**:155–9.
2 Abdullah AN, Drake SM, Wade AA, *et al.* Balanitis (balanoposthitis) in patients attending a department of genitourinary medicine. *Int J STD AIDS* 1992;**3**:128–9.
3 Michel M, Gutmann L. Methicillin-resistant Staphylococcus aureus and vancomycin-resistant enterococci: therapeutic realities and possibilities. *Lancet* 1997;**349**:1901–6.
4 Coello R,Glynn JR, Gaspar C, *et al.* Risk factors for developing clinical infections with methicillin resistant Staphylococcus aureus (MRSA) amongst hospital patients initially only colonized with MRSA. *J Hosp Infect* 1997;**37**:39–46.
5 Mylotte JM, Tayara A. Staphylococus aureus bacteraemia: predictors of 30-day mortality in a large cohort. *Clin Infect Dis* 2000;**31**:1170–4.
6 Tentolouris N, Jude EB, Smirnof I, *et al.* Methicillin-resistant Staphylococcus aureus: an increasing problem in diabetic foot clinic. *Diabet Med* 1999;**16**:767–71.
7 Romero-Vivas J, Rubio M, Fernandez C, *et al.* Mortality associated with nosocomial bacteremia due to methicillin-resistant Staphylococcus aureus. *Clin Infect Dis* 1995;**21**:1417–23.

Accepted for publication 8 March 2001

Chlamydia trachomatis reinfection rate: a forgotten aspect of female genital chlamydia management

EDITOR,—Hillis *et al*[1] reported that repeated episodes of infection of female genital tract with *Chlamydia trachomatis* increase the risk of hospital admission for pelvic inflammatory disease and ectopic pregnancy. The first diagnosed attack of genital infection with chlamydia presents the clinician with a unique opportunity to implement measures to minimise the risk of reinfection—that is, health promotion and contact tracing.

During April–June 1998 we reviewed the case notes of female patients who were diagnosed with genital chlamydia at Leicester Royal Infirmary and Derbyshire Royal Infirmary GUM clinics in the year 1996 for evidence of repeat episode of genital chlamydia. We also noted the following data: age at presentation with the first episode of infection, time for presentation with reinfection, test of cure if performed, co-infection with gonorrhoea, review by health adviser, contact(s) traced and treated in the first 3 months after diagnosis. For the purpose of the study we defined reinfection as a patient testing positive for genital chlamydia 30 days or more after the completion of treatment. We also looked at the genital chlamydia treatment protocols in both clinics.

A total of 540 female patients were diagnosed with chlamydia (311 at Leicester and 229 at Derby). The patients' mean age at first episode was 22.6 years for Leicester and 23.4 years for Derby. The health advisers had made contact with 94.5% (294) in Leicester and 97.8% (224) in Derby; 85.2% (265) of the patients diagnosed at Leicester returned at 30 days or more and were retested for chlamydia compared with 87.3% (200) at Derby; 9% (24) episodes of repeat infection were identified in Leicester group compared to 17% (34) episodes in the Derby cohort. The mean period for presentation with reinfection was 9.4 months (range 3–25) at Leicester and 9.8 months (range 2–24) at Derby. At Leicester the contacts of 66.5% (207) patients were traced and treated compared to 64.6% (148) at Derby. A test of cure was performed on 282 patient in Leicester (where it was routine practice); 2.5% (seven) were found to be positive for chlamydial infection, while the test of cure was performed on 22 patients in Derby (where it was performed selectively) revealed no positive cases.

Of the reinfected patients 58.3% (14) at Leicester were reinfected because of failure to trace and treat their partner(s) compared to 35.3% (12) at the Derby clinic.

Both clinics manage genital chlamydia with what was considered standard treatment and perform contact tracing wherever possible. Two reinfected patients from each clinic were also co-infected with gonorrhoea.

Other risk factors for reinfection—for example, ethnic origin, number of sexual partners,[2] were not analysed as these data was not discernible from the notes.

This retrospective study highlights the fact that a substantial number of patients get reinfected with chlamydia despite health education and counselling by health advisers. Though the figures (66.5% and 64.6%) for partner notification and treatment were close to that proposed by the Central Audit Group (70%)[3] the proportion of those reinfected is still too high. Does the message that repeat episodes of genital chlamydia are more damaging get through to our patients or do we need a new health education strategy?

Currently, as the success of management of genital chlamydia is evaluated by the level of contact tracing, the number of patients referred to health advisers, and number of contacts per index patient seen and treated,[4–6] we believe it is time to evaluate outcome measures in terms of reinfection rates. Large prospective studies need to be done to elucidate this aspect of chlamydial infection management.

Contributions: PS had the original idea; EH collected and analysed the data EH and JD wrote the manuscript.

E HERIEKA
P SCHOBER
J DHAR
Department of GUM, Leicester University Hospitals

Correspondence to: E Herieka, Department of GUM, Leicester Royal Infirmary, LE1 5WW, UK
bherieka@uhl.trent.nhs.uk

1 Hillis SD, Owens LM, Marchbanks PA, *et al.* Recurrent chlamydia infections increase the risks of hospitalization for ectopic pregnancy and pelvic inflammatory disease. *Am J Obstet Gynaecol* 1997;**176**:103–7.
2 Hillis SD, Nakashima A, Marchbanks PA, *et al.* Risk factors for recurrent chlamydia trachomatis infections in women. *Am J Obstet Gynecol* 1994;**170**:801–6.
3 Health Education Authority. *Clinical guidelines and standards for management of genital chlamydia infection.* Central Audit Group in Genitourinary Medicine. London: HEA, 1998.
4 Jarvis RR, Curless E, Considine K. Outcome for contact tracing for chlamydia trachomatis in a district general hospital. *Int J STD AIDS* 1999; **10**:250–3.
5 Radcliffe K, Clarke J. Contact tracing where do we go from here (editorials). *Sex Transm Dis* 1998;**74**:313–14.
6 FitzGerald M, Bell G. Measuring the effectiveness of contact tracing. *Int J STD AIDS* 1998; **9**:645–6.

Accepted for publication 8 March 2001

The Society of Apothecaries Diploma examination in Genitourinary Medicine: death of the viva voce?

EDITOR,—The London Apothecaries Diploma in Genitourinary Medicine is likely to become even more important in the near future as all specialist registrars and probably

many non-consultant grades will be expected to pass it as part of higher training in the specialty in the United Kingdom. It would be interesting to have some figures on the number of candidates anticipated in the near future and how this will affect the examination mechanism.

The Apothecaries Diploma Board rejected viva voce examinations some time ago as being prone to bias. This is consistent with much current research on examination techniques.[1] Oral examinations are regarded as being inherently biased and of poor interexaminer reliability. How much, however, is this also a candidate number related phenomenon? With courses for small numbers, such as the Diploma in Venereology and Genitourinary Medicine of Liverpool University, we find the viva a key mechanism to discriminate between candidates precisely because the examiner can adjust the level of difficulty of questions to the ability of each candidate. The viva is a good instrument to measure clinical thinking, ability to take a sexual history, and counselling. Role play need not be uniquely the province of actors. The viva is particularly useful for borderline candidates—for example, those who are disadvantaged in essays which are notoriously dependent on proficiency in English (not to mention handwriting!). In order to reduce interexaminer variation inherent in the viva, all candidates for the Liverpool Diploma are viva'd independently by both sets of (two) examiners. Clearly, this would be extremely cumbersome and time consuming for the current and anticipated numbers taking the Apothecaries Diploma.

The venerable Apothecaries' Hall is apparently "unsuitable" for projecting slides a convenient way of basing a clinical skills/data interpretation type examination for a large number of candidates—for example, MRCP Part 2 and many other postgraduate medical examinations. Will the examiners of the Apothecaries Diploma have to begin to think of more appropriate premises for their examination?

HUMPHREY BIRLEY
Department of GUM Royal Liverpool University Hospital, Liverpool L7 8XP, UK

1 Esmail A, May C. Oral exams—get them right or don't bother. *BMJ* 2000;**320**:375.

Detection of chlamydia on meatal swabs

EDITOR,—The advent of ligase chain reaction (LCR) and other DNA technologies and their greater sensitivity[1] has allowed the possibility of taking samples other than from the urethra in men, including urine samples.[2–5]

Although urine samples have the advantage of being collected non-invasively, the sensitivity of LCR tests on such samples is less than for urethral samples.[2] This may be due to the presence of inhibitors in urine.[6] The reduced sensitivity on urine samples may be unacceptable, particularly if testing populations with a high prevalence of chlamydia infection. Furthermore processing of urine samples is more laborious.

It is currently recommended that specimens for the detection of genital *Chlamydia trachomatis* infection by LCR are taken 2–4 cm from the urethral orifice and the swab rotated for 3.5 seconds.[7] Many men are unable to tolerate this. It is often painful and may discourage patients from seeking medical attention.

A pilot study was conducted to compare the sensitivity of LCR testing for genital chlamydial infection in men, taken from the meatus itself against the standard technique.

All male patients attending the GUM clinic over a 3 month period were included in the study if they had symptoms or signs compatible with chlamydia, or if a contact of a known case of chlamydia. A swab was taken from the urethra in the standard fashion. A second swab was taken from the meatus. After the sixth week of the study the order of the first and second swabs was changed, in order to evaluate any bias related to the order of the swabs. Specimens were processed using Abbott Laboratories LCx Chlamydia and handled according to the manufacturer's guidelines.

Twenty five patients were asked to evaluate the swabs and to state which swab caused least discomfort or if there was no difference between them. A total of 208 men were recruited to the study. The overall prevalence of genital chlamydia infection in our population was 25% (52/208). A confirmed diagnosis was made if both of the samples performed from the same man were positive for chlamydia, or if one sample was positive together with an equivocal result. There were no false positive tests using these criteria giving all methods a specificity of 100%.

There was no significant difference in detection rates between the subgroups where the order of swabs was changed.

There was no significant difference in the sensitivity of samples taken from the meatus (100%) or from deep within the urethra (96.2%). Of the 25 men questioned two (8%) felt that the meatal swab caused more discomfort; 19 (76%) had a strong preference for the meatal technique. Only four men (16%) stated the swabs were similar in terms of discomfort.

A meatal swab for the detection of chlamydia is more acceptable to patients and has a similar sensitivity to the traditional technique of urethral sampling

Urine samples, although non-invasive, are less likely to yield a positive diagnosis compared to urethral/meatal swabs and require extra processing by laboratories.

In a high prevalence setting (such as a sexual health clinic), the meatal technique provides a specific, highly sensitive, and well tolerated sampling method for the detection of chlamydia infection in men.

Further studies to confirm our findings in symptomatic, and asymptomatic, chlamydia infection are needed before introducing this technique as routine clinical practice.

Contributors: HL, principal investigator and author; SMM, investigator and edited final draft; JLD, data collection and obtained clinical specimens; MSS, investigator and processed specimens.

H LAMBA
J L DAVIES
S M MURPHY
Patrick Clements Clinic, Central Middlesex Hospital, Acton Lane, Park Royal, London NW10 7NS, UK

M S SHAFI
Department of Microbiology

Correspondence to: Dr H Lamba, St Mary's Hospital, Praed Street, London W2 1NY, UK

1 Stary A, Tomazic-Allen S, Choueiri B, *et al.* Comparison of DNA amplification methods for the detection of Chlamydia trachomatis in first-void urine from asymptomatic military recruits. *Sex Transm Dis* 1996;**23**:97–102.
2 Carroll KC, Aldeen WE, Morrison M, *et al.* Evaluation of the Abbott LCx ligase chain reaction assay for detection of Chlamydia trachomatis and Neisseria gonorrhoeae in urine and genital swab specimens from a sexually transmitted disease clinic population. *J Clin Microbiol* 1998;**36**:1630–3.
3 Stary A, Najim B, Lee HH. Vulval swabs as alternative specimens for ligase chain reaction detection of genital chlamydial infection in women. *J Clin Microbiol* 1997;**35**:836–8.
4 Chernesky MA, Lee H, Schachter J, *et al.* Diagnosis of Chlamydia trachomatis urethral infection in symptomatic and asymptomatic men by testing first-void urine in a ligase chain reaction assay. *J Infect Dis* 1994;**170**:1308–11.
5 Hook EW 3rd, Smith K, Mullen C, *et al.* Diagnosis of genitourinary Chlamydia trachomatis infections by using the ligase chain reaction on patient-obtained vaginal swabs. *J Clin Microbiol* 1997;**35**:2133–5.
6 Berg ES, Anestad G, Moi H, *et al.* False-negative results of a ligase chain reaction assay to detect Chlamydia trachomatis due to inhibitors in urine. *Eur J Clin Microbiol Infect Dis* 1997;**16**: 727–31.
7 Abbott Diagnostics Division. Package Insert for LCx™ Chlamydia.

Accepted for publication 8 March 2001

HIV positive and negative homosexual men have adopted different strategies for reducing the risk of HIV transmission

EDITOR,—To reduce the risk of HIV transmission, some homosexual men have adopted a strategy whereby they only have unprotected anal intercourse (UAI) with a person of the same HIV status (known as "concordant UAI").[1] In London, homosexual men *in a relationship* are more likely to know the HIV status of their UAI partner than men not in a relationship[2] and so establish concordance. However, this was not examined for HIV positive and negative men separately. A survey conducted in January-February 2000 among homosexual/bisexual men attending one of six gyms in central London, as part of an ongoing behavioural surveillance programme,[2 3] has allowed risk reduction strategies to be considered by HIV status. A total of 792 homosexual men (median age 35 years) completed a confidential questionnaire (estimated response rate 50–60%[2 3]); 126 (16.0%) were HIV positive, 477 (60.2%) HIV negative, while 169 (21.3%) had never had an HIV test (data missing for 20 men). Just over half the men (55.2%) said they were currently in a relationship with another man; this did not differ significantly by HIV status (p=0.1).

Our analysis focused on how sexual risk behaviour varied both by HIV as well as by relationship status. For HIV negative and positive men, UAI was classified as either concordant (UAI with a partner of the same HIV status) or non-concordant (UAI with a partner of unknown or discordant HIV status). Men reporting more than one UAI partner were classified as concordant only if all UAI partners were of the same HIV status as themselves. Men also indicated whether they had had UAI with a main partner only, casual partner(s), or both. One third of all men (32.9%, 259) reported UAI in the previous 3 months; HIV positive men 42.1% (53/126), HIV negative 34.7% (165/475, data missing for two men) (p=0.1). Overall, concordant UAI was reported by 18.7% (89) of HIV negative and 21.4% (27) of HIV positive men (p=0.4). For HIV negative men, concordant UAI was predominantly reported by those in a relationship and rarely by men who were not (28.6% *v* 5.0%, p<0.001) (table 1). Concordant UAI was usually with a main partner alone. By way of comparison, HIV positive men were just as likely to report