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. It is an inflammation of the glans penis and the prepuce, and its causes include bacterial and yeast infections, parasitic infestations, trauma, and irritants. However, to our knowledge, no case has been reported to be caused by MRSA.

A 49 year old insulin dependent diabetic male presented as 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 suprapubic 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 trichomoniasis 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. The organism can survive for long periods in the hospital and the home environment and can colonise the skin, nose, or throat of patients and healthcare staff. Several reports have suggested that diabetic patients are more susceptible to *Staphylococcus aureus* bacteriaemia MRSA has been isolated from different sites in diabetic patients but not the genitalia. MRSA rarely invades intact skin; however, it can give rise to severe infections—for example, wound infection, bacteremia, endocarditis, and osteomyelitis.

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.

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

EDITOR,—Hillis et al 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 with 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 reininfected patients 58.3% (14) at Leicester were reininfected 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 reininfected patients from each clinic were also co-infected with gonorrhoea.

Other risk factors for reinfection—for example, ethnic origin, number of sexual partners,—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 reininfected 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%) the proportion of patients traced and treated 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 treatment of reinfection 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, 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.

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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...
Detection of chlamydia on meatal swabs

Editor,—The advent of ligase chain reaction (LCR) and other DNA technologies and their greater sensitivity has allowed the possibility of taking samples other than from the urethra in men, including urine samples. \(^1\) Although urine samples have the advantage of being collected non-invasively, the sensitivity of LCR tests on such samples is less than from urethral samples. \(^1\) This may be due to the presence of inhibitors in urine. 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. \(^2\) 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 a symptomatic 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 on 16 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 100%.

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

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.

Editorial—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 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, \(^2\) 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 (response rate 50–60%). \(^3\) Of the men (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 that 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 34.2% (42/121) (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=0.6). For HIV negative men, concordant UAI was predominantly reported by those in a relationship and rarely by men who were not (28.6% vs. 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
Table 1  Unprotected anal intercourse (UAI) in the previous 3 months

<table>
<thead>
<tr>
<th>HIV negative men (n=477*)</th>
<th>HIV positive men (n=126)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main only</td>
</tr>
<tr>
<td>Type of partner for UAI</td>
<td>%</td>
</tr>
<tr>
<td>Men in a relationship</td>
<td></td>
</tr>
<tr>
<td>Reporting UAI</td>
<td>n=276</td>
</tr>
<tr>
<td>Concordant UAI</td>
<td>27.1 (75)</td>
</tr>
<tr>
<td>Non-concordant UAI</td>
<td>8.0 (22)</td>
</tr>
<tr>
<td>Total</td>
<td>35.1 (97)</td>
</tr>
<tr>
<td>Men not in a relationship</td>
<td></td>
</tr>
<tr>
<td>Reporting UAI</td>
<td>n=199</td>
</tr>
<tr>
<td>Concordant UAI</td>
<td>2.5 (5)</td>
</tr>
<tr>
<td>Non-concordant UAI</td>
<td>1.5 (3)</td>
</tr>
<tr>
<td>Total</td>
<td>4.0 (8)</td>
</tr>
</tbody>
</table>

*Data on UAI or relationship status missing for two HIV negative men.
†Men reporting UAI with a partner of unknown or discordant HIV status. Non-concordant UAI was significantly (p=0.001).

Seroconcordance among negative men can only be established with confidence if both men test for HIV together. For this reason it is difficult for HIV negative men to establish concordance with a casual partner. On the other hand, HIV positive men can establish concordance, be it with a casual or regular partner, simply by mutual disclosure. This requires no confirmatory test. Although seroconcordant UAI among positive men carries no risk of HIV transmission to an uninfected person, it raises the possibility of reinfection and chlamydia, and trichomoniasis were all clear. He was treated with a 5 day course of metronidazole as per MSVD guidelines.

If this patient had turned up without a contact slip, epidemiological treatment of trichomoniasis is unlikely to have been instituted and contact tracing would have been impossible. Thanks to the use of text messaging on this man’s mobile phone, appropriate treatment was initiated. Certainly patients and health advisers appreciate the security offered by mobile phones (no other family members can take the calls), the instant access, and it avoids additional paper work. The use of text messaging and mobile phones for contact tracing may be considered as an adjunct to contact slips in GU clinics.

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Chaperoning male patients

EDITOR,—I was delighted to see the letter by Fisk et al in the journal. My staff and I were becoming alarmed at the suggestion that male patients should have a chaperone when they are being examined by a male doctor. Was common sense finally leaving the specialty? There are thousands of consultations taking place throughout the country, in both primary and secondary care, where sexual issues are discussed. These often include a genital examination, and just because there is a problem found with one or two individual patients or doctors it doesn’t mean the whole national service has to be turned upside down. Surely, the last thing an overworked, under pressure, genitourinary medicine service needs is to have another section of its skilled staff standing idly by in a room, while either a consultation or examination is taking place. I have never found any difficulty in taking the swabs on my own, and labelling the stuff myself, and have never felt the need for another person handing me things during a male examination. Indeed, I could easily see that interfering with the process at times, as there are some issues patients feel more comfortable discussing on a one to one basis, and they can feel embarrassed and hindered if there is a chaperone present.

An occasional complaint is a small price to pay for the 99.9% otherwise effective consultations that occur. It’s lovely to see work like this published, as it backs up the evidence base that says we don’t need this.
Lichen sclerosus of the glans is significantly associated with penile carcinoma

EDITOR,—We read with interest the article by Riddell et al on 66 men with penile lichen sclerosus (PLS) attending a department of genitourinary medicine. In this study, the authors found no cases of malignancy.

We have previously reported a retrospective study on the incidence of cancer on 86 cases of PLS retrieved from our histopathological files over a 10 year period (1987–97). In that study, five cases showed malignant transformation—namely, squamous cell carcinoma (SCC) (three cases), in situ carcinoma (one case), and verrucous carcinoma (one case).

Since that report, we decided to interview all PLS patients in order to rule out any further malignancy that occurred over time. Of 86 patients identified, 60 were evaluated at our clinic. Among these, we found three additional patients treated with partial penectomy for invasive SCC at other institutions.

In this current study, eight (9.3%) out of 86 patients with PLS developed an epithelial malignancy on PLS. Of these, five patients positive for HPV 16 infection, and this may have hastened the progression towards cancer resulting in a shorter lag time.

Table 1. Clinical and histopathological features of eight cases of carcinoma on penile lichen sclerosus

<table>
<thead>
<tr>
<th>Patient No</th>
<th>Age of onset of PLS (years)</th>
<th>Age of onset of Ca (years)</th>
<th>Lag time (years)</th>
<th>Site</th>
<th>Clinical aspect of malignancy on PLS</th>
<th>Histopathology</th>
<th>PCR testing for HPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>41</td>
<td>62</td>
<td>21</td>
<td>glans</td>
<td>fungating keratotic nodule with a white-yellowish hue slightly circumscribed, erythematous, oozing, and slightly infiltrated plaque</td>
<td>SCC well differentiated</td>
<td>negative</td>
</tr>
<tr>
<td>2*</td>
<td>36</td>
<td>59</td>
<td>23</td>
<td>glans</td>
<td>multiple differentiated, and well differentiated, and ulcerated plaques sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC well differentiated</td>
<td>negative</td>
</tr>
<tr>
<td>3*</td>
<td>41</td>
<td>55</td>
<td>14</td>
<td>glans, coronary sulcus, inner aspect of the foreskin</td>
<td>exophytic verrucous whith node sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC well differentiated</td>
<td>positive</td>
</tr>
<tr>
<td>4*</td>
<td>39</td>
<td>49</td>
<td>10</td>
<td>glans</td>
<td>sharply circumscribed, erythematous, eroded, crusted, and ulcerated plaque</td>
<td>SCC well differentiated</td>
<td>negative</td>
</tr>
<tr>
<td>5*</td>
<td>29</td>
<td>47</td>
<td>18</td>
<td>glans</td>
<td>sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC</td>
<td>positive</td>
</tr>
<tr>
<td>6</td>
<td>75</td>
<td>85</td>
<td>10</td>
<td>glans</td>
<td>sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC</td>
<td>positive</td>
</tr>
<tr>
<td>7</td>
<td>66</td>
<td>70</td>
<td>15</td>
<td>glans</td>
<td>sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC</td>
<td>positive</td>
</tr>
<tr>
<td>8</td>
<td>33</td>
<td>67</td>
<td>34</td>
<td>glans, coronary sulcus</td>
<td>sharply circumscribed, erythematous, and ulcerated plaque</td>
<td>SCC</td>
<td>positive</td>
</tr>
</tbody>
</table>

*Previously reported cases.

PLS = penile lichen sclerosis; Ca = carcinoma; PCR = polymerase chain reaction; HPV = human papillomavirus; SCC = squamous cell carcinoma; VC = verrucous carcinoma.
The HIV antibody test is usually performed at the booking visit with other routine antenatal screens. This allows the parents opportunity, when giving negative HIV, to discuss the sexual transmission of infections, to emphasise that the negative results cannot be extrapolated to the partner, and advocate safer sex, which is commonly abandoned following conception.

**Table 1** Peripartum HIV test results

<table>
<thead>
<tr>
<th>Time (in weeks of gestation)</th>
<th>1 T = 12 weeks (“Booking blood”)</th>
<th>2 T = 29 weeks</th>
<th>3 T = 13 weeks (“Booking blood”)</th>
<th>4 T = 13 weeks post partum (child presents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital where blood taken</td>
<td>X Blood was stored and retrospectively tested</td>
<td>Y Index antenatal test (serum not available for repeat retrospective testing)</td>
<td>Y Blood was stored and retrospectively tested</td>
<td>St Mary's Postnatal test. Blood stored</td>
</tr>
<tr>
<td>HIV antibody screening tests</td>
<td>i Clear negative Detect-HIV®</td>
<td>ii OD=0.363, CO=0.584</td>
<td>ii Weak positive OD=0.363, CO=0.584</td>
<td>Strong positive OD=0.363, CO=0.584</td>
</tr>
<tr>
<td>HIV specific antibodies (CHL in-house EIA)</td>
<td>i Clear negative OD=0.363, CO=0.584</td>
<td>—</td>
<td>Strong positives OD=0.363, CO=0.584</td>
<td>Strong positives OD=0.363, CO=0.584</td>
</tr>
<tr>
<td>HIV western blot1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>HIV RNA (copies/ml) (copies/ml)</td>
<td>Not detected (&lt; Limit of detection)</td>
<td>Not detected (&lt; Limit of detection)</td>
<td>Not detected (&lt; Limit of detection)</td>
<td>Not detected (&lt; Limit of detection)</td>
</tr>
</tbody>
</table>

1. Enzyme immunoassay (EIA) for detection of antibody to HIV-1 and 2. Biochem Immunosystems Inc, Montreal, Quebec, Canada.
2. EIA for detection of antibody to HIV-1 (Abbott Murex). Murex Biotech Ltd, Dartford, UK.
3. EIA for detection of antibodies to HIV-1 and 2. Abbott Laboratories, IL, USA.
5. Western blot for detection of antibodies to HIV antigens. Genelabs Diagnostics, Singapore.
6. Polymerase chain reaction (PCR) for quantitative detection of HIV-1 RNA. Roche Diagnostics, Branchburg, NJ, USA.

**Economic advantages of ligase chain reaction for diagnosis of genital Chlamydia trachomatis infection in GUM clinic attendees**

**EDITOR,—**Genital infection with *Chlamydia trachomatis* is highly prevalent and recognised as a major threat to public health. There is now a wealth of evidence to demonstrate the superiority of DNA amplification techniques over antigen detection and culture. Only one large study has directly compared ligase chain reaction (LCR) with enzyme immunoassay (EIA) on identical clinical material and no studies have analysed the health economic impact of LCR in a genitourinary medicine (GUM) clinic population. We studied the diagnostic effectiveness and cost of LCR compared with EIA.

All GUM attendees undergoing sexual health screening were offered the opportunity to participate. Men presenting with dysuria or urethral discharge were defined as symptomatic. Swabs were collected in a randomised order from the cervix in female patients and 4–5 cm proximal to the urethral meatus in male patients. Urethral specimens in male patients were evaluated for evidence of urethritis (defined by >4 polymorphs per high powered field). LCR was performed using a standard immunoassay technique (Organon Chlamydia-Tek), with confirmation of reactive tests by microdot DIF. LCR (LCX system, Abbott Laboratories) was also performed on every specimen.
testing positive by LCR alone were retested by an alternative PCR assay for DNA sequences coding for the major outer membrane protein (MOMP) of Chlamydia trachomatis.

A total of 148 male and 153 female patients were tested; 23/148 (16%) swabs from male patients were positive for Chlamydia trachomatis by LCR (see fig 1).

The sensitivity, specificity, negative and positive predictive values, and cost/test of LCR and EIA, respectively, were 100%, 100%, 100%, 100%, £6.64 and 58%, 100%, 95%, 100%, £4.05.

Of 33 cases of chlamydial infection, 15 cases (12 (92.2%) in men and two (20.0%) in women) would have remained undetected if EIA had been used alone.

Although EIA tests cost less than LCR, the inferior detection rate for EIA (17 patients need to be screened per case detected) compared with LCR (nine patients screened per case detected) was also included in analysis of the results. The cost per case of chlamydial infection detected using EIA in this population was £65, compared with £50 for LCR.

In a hypothetical cohort of 100 GUM attendees, with an 11% prevalence of chlamydial infection (as in the present study), testing with EIA would cost £405 and would detect 6.4 of the 11 cases. Testing with LCR would cost £564 and detect all 11 cases. Testing the cohort with EIA would cost £405 and would detect 4.6 additional cases, whereas testing with LCR would cost £564 and detect all 11 cases. The additional benefit is 4.6 additional cases detected. The additional cost of LCR per additional case detected is £34.

In summary, this study demonstrates that the detection of Chlamydia trachomatis.

The International Herpes Alliance has introduced a website (www.herpesalliance.org) from which can be downloaded patient information leaflets. Its sister organisation the International Herpes Management Forum (website: www.IHMF.org) has launched new information leaflets. Further details: Congress Promotion Secretary (tel: +34.93.451.74 38; www.perinatol2001.com).

Second International Conference on Sexual Health, to be held in Bangkok, Thailand on 23–28 February 2002. Calls for abstracts deadline 1 September 2001. Further details: European Secretariat, Dr Richard Burack (tel: +44 (0) 20 8599 8029; email: siamcare@aol.com).

International Conference on HIV/AIDS 16–19 December 2001, Mumbai, India. Further details: Dr Chander P Puri, President, Indian Society for Study of Reproduction and Fertility, Institute for Reserach in Reproduction, Jehangir Merwanji Street, Parel, Mumbai 400012, India [Tel: 413 773 7 (Direct), 412 3111–2–6; fax: 091–022–4964853 or 091–022–4139412; e-mail: vicchin@bom4.vsnl.net.in OR dirirr@vsnl.com].

10th International Symposium on Human Chlamydial Infection, 16–21 June 2002, in Antalya, Turkey. The scientific programme will encompass the breadth of chlamydial research from clinical and epidemiological studies to molecular and cell biology of all species of Chlamydia. Further details: Professor A Demir Serter, Department of Clinical Microbiology and Infectious Diseases, Ege University, Faculty of Medicine, 35100 Bornova, Izmir, Turkey (Fax: 90 232 343 71 30; e-mail: ISHICIX@itsa.ucsf.edu).