A study on the possible association of dysfunctional uterine bleeding with bacterial vaginosis, mycoplasma, ureaplasma, and Gardnerella vaginalis

Editor—A number of studies in the recent years have shown that bacterial vaginosis or its associated micro-organisms mycoplasma/ureaplasma may be associated with various obstetric and gynaecological complications such as pelvic inflammatory disease and infertility,1 premature rupture of membranes and preterm labour,2 plasma cell endometritis,3 non-specific urethritis in male partners,4 and in our previous study5 we showed colonisation of the endometrium by mycoplasma and ureaplasma in patients with bacterial vaginosis.

The purpose of this study was to see if there is any association between dysfunctional uterine bleeding (DUB) and mycoplasma, ureaplasma, and/or bacterial vaginosis.

Ten patients, all with dysfunctional uterine bleeding admitted for abdominal hysterec- tomy, were recruited for the study. Patients were between 38 and 48 years (mean age 44) and all except one were parous. Appropriate ethics committee approval and informed consents were taken.

A detailed history was taken, particularly obstetrics and gynaecological, and any history of bacterial vaginosis or troublesome vaginal discharge. A preoperative high vaginal swab for microscopic diagnosis of bacterial vaginosis was taken. At operation, the endometrial cavity was opened by splitting the anterior wall of the uterus and an endome- trial swab and biopsy were taken for microbial culture and scanning electron microscopy for mycoplasma, ureaplasma, and Gardnerella vaginalis.

None of the patient had any history of bacterial vaginosis, troublesome vaginal discharge, or any obstetric or gynaecological complications. Microscopic exam- ination of the high vaginal swabs were all normal except one with possible bac- terial vaginosis. Microbial culture and scanning electron microscopy showed no mycoplasma, ureaplasma, or Gardnerella vaginalis.

Although there is definite association of colonisation of the endometrium by mycoplasma and ureaplasma in patients with bacterial vaginosis, as we showed in our previous study, this study did not show any association of DUB with bacterial vaginosis, Gardnerella vaginalis, mycoplasma, or ureaplasma. Any significant association of DUB and bacterial vaginosis appears un- likely, as the age group of the majority of patients with DUB, as in this study, is also different from the age group for bacterial vaginosis.

Accepted for publication 7 June 2000

Ethnicity and country of acquisition of HIV in the current Leicester genitourinary medicine clinic cohort

Editor—We have surveyed the regular HIV infected attenders in the Leicester genito- urinary medicine (GUM) HIV cohort; there are currently 60 men and 16 women. Twenty five per cent are black African and 13% are of Indian/Pakistani/Asian stock, while 62% are white. This amounts to 19 of 8258 black Africans in the Leicestershire total county population (which includes Leicester central district) being HIV positive. Forty seven of 14 011 white people and 10 of 77 537 Asians in the Leicestershire total county population were also HIV positive (Leicester City Council, from 1991 census figures, 2000, personal communica- tion).

For acquisition of HIV related to ethnicity, the results are as displayed in table 1.

In 1997, of those with heterosexually transmitted HIV in the United Kingdom, 3.3% were black Caribbean, 49% were black African, with 33% being white, and 2.3% were Asian.

In 1999, the Communicable Disease Report stated that, of female HIV infected people in England and Wales, 32% were white people and 49.5% were black Africans, and 2.7% were black Caribbean, and 1.3% were south Asians.

Compared with the latter England and Wales figures, Leicester appears to have a moderate underrepresentation of black Africans with HIV, and a moderate overrepresentation of Asians in its cohort. This latter figure is to be expected because Leicester's Asian population is 23.7% of the total population of the city (Leicester City Council, 1991 census figures, 2000, personal communication). However, the Asian figure is not that high pro rata, possibly because cultural factors prohibit sex outside marriage.

Quinn et al have shown recently that viral load is the chief predictor of the risk of heterosexual transmission of HIV-1, and that transmission is rare among people with levels of less than 1500 copies of HIV-1 RNA per ml.

It may be that HAART (highly active antiretroviral therapy) for HIV infected peo- ple has caused transmission to be low in the United Kingdom but, as Cohen says, such a theory has not been proved.4 The viral subtype dominant in parts of Africa (clade C), has unique properties that favour sexual transmission.1 Other factors that make Africans more susceptible to HIV than those who live in more developed countries include lack of host factors that reduce infection risk; the plasma HIV-1 RNA level in seropositive people being higher in sub-Saharan Africans; the lack of mutations in the gene for chemokine receptor 5; circumcision status, with most men in Africa being uncircumcised; and the high prevalence of ulcerative sexually transmitted diseases.5 Some of these factors will operate for Asian patients born in Africa.

Thus, ethnicity and country of acquisition of HIV in Leicester as elsewhere, is a reflection of interwoven, genetic, environmental and behavioural, political, and geographical factors.6 Therefore, we cannot just examine nationality in isolation when considering HIV epidemiology. Travellers from Britain to Thailand, the Philippines, India, and Africa especially should be forewarned of the risks of sex and healthcare needle exposure and/or blood transfusions in all travel medicine consultations.

DEREK T P EVANS VINCENT C RILEY PETER G FISK
Department of Genito-urinary Medicine, Leicester Royal Infirmary, Leicester LE1 5WW

Correspondence to: Dr Evans

Accepted for publication 14 June 2000

Table 1 Table of ethnicity in relation to country of acquisition of HIV, as found in the Leicester genitourinary medicine clinic HIV cohort, and assessed in April 2000

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Country of acquisition</th>
<th>Asian</th>
<th>African</th>
<th>White</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td></td>
<td>2 (3%)</td>
<td>2 (3%)</td>
<td>2 (3%)</td>
<td>9%</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>2 (3%)</td>
<td>19 (25%)</td>
<td>2 (3%)</td>
<td>31%</td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td>3 (5%)</td>
<td></td>
<td>43 (54%)</td>
<td>60%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9%</td>
<td>31%</td>
<td>60%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Thailand.

A MURRAY
Department of Obstetrics and Gynaecology


www.sextransinf.com

Sex Trans Inf 2000;76:407–414
Detection of 14-3-3 brain protein in cerebrospinal fluid of HIV infected patients

EDITOR,—The 14-3-3 proteins are a group of highly conserved proteins involved in intracellular signal transduction. Detection of 14-3-3 brain protein has been described in cerebrospinal fluid (CSF) of patients with transmissible spongiform encephalopathies including both sporadic and variant Creutzfeldt–Jakob disease.1 2 False positive results have been reported in conditions producing (sub)acute neuronal destruction, including herpes simplex encephalitis, ischaemic stroke, multi-infarct dementia, and paraneoplastic syndromes.3 4 We postulated that 14-3-3 brain protein may be detected in CSF from patients with HIV associated dementia complex (HADC) as this condition is characterised neuropathologically by a giant cell encephalitis, leucoencephalopathy, astroglisis and neuronal loss.

We prospectively studied 17 HIV antibody positive patients (14 men) aged 27–60 (median 37) years, with CD4 counts of 0–220 (median 20) cells x10^3/l, who underwent lumbar puncture for investigation of HADC (six patients), stages of lymphoma (five patients), or investigation of other conditions (two), cervical radiculopathy (one), chronic demyelinating polyradiculopathy (one), CMV encephalitis (one), self limiting headache (one). Of those with HADC, the severity of dementia assessed using Memo- rial Sloan-Kettering criteria, was mild in two and moderate in four. The degree of atrophy on cranial magnetic resonance imaging, used as a marker of neuronal loss, was mild in four and moderate in two. Clinical details of those with lymphoma are given in table 1. At each lumbar puncture an aliquot of CSF (250 µl) was frozen immediately at −20°C and stored for subsequent 14-3-3 protein analysis.

CSF was routinely processed as described previously.5 Detection of 14-3-3 protein was done without knowledge of the patient’s diagnosis, using a technique described by Hsich et al,6 modified to use anti-14-3-3 γ polyclonal rabbit antibody.

In 14 of 17 patients CSF was negative for 14-3-3 protein. Of the three with detectable 14-3-3 protein in CSF, all had lymphoma but only one had CNS disease, the other two had only extraneural disease (table 1). These data, although from a small study population, suggest that detection of 14-3-3 protein in CSF is not useful for diagnosis of HADC. Detectable 14-3-3 protein has previously been reported in a non-HIV infected patient with CNS lymphoma,7 so this observation in our patient is not unique, although brain necrosis from coexisting cerebral toxoplasmosis provides an alternative explanation. Of the two patients with extra-neural lymphoma and detectable 14-3-3 protein in CSF, one had EBV DNA in CSF and so was at high risk of developing cerebral lymphoma. This possibility could not be confirmed as necropsy was not performed. In neither of the latter two patients was there a CSF pleocytosis, so contamination by 14-3-3 protein derived from peripheral blood leucocytes is unlikely. In the final case the absence of limbic encephalitis or cere-bellar degeneration makes it difficult to ascribe the finding to a paraneoplastic process.

R F MILLER
Department of Sexually Transmitted Diseases, Royal Free and University College Medical School, Mortimer Market Centre, Mortimer Market, Off Gage Street, London WC1E 6AU, UK

A J E GREEN
G GIOVANNONI
E J THOMPSON
Department of Neuroimmunology, Institute of Neurology and Neurosurgery, Queen Square, London WC1N 3BG

Correspondence to: Dr Miller

Accepted for publication 14 July 2000

Table 1 Clinical features, results of CSF brain protein detection, and outcome in patients with lymphoma

<table>
<thead>
<tr>
<th>Patient</th>
<th>Type of lymphoma</th>
<th>No of lumbar puncture</th>
<th>Interval between lumbar puncture (weeks)</th>
<th>14-3-3 detection</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary CNS</td>
<td>1</td>
<td>11</td>
<td>No</td>
<td>Died 2 weeks after second lumbar puncture. Necropsy showed also cerebral toxoplasmosis.</td>
</tr>
<tr>
<td>2</td>
<td>Primary CNS</td>
<td>1</td>
<td>3</td>
<td>Yes</td>
<td>Died 2 weeks after second lumbar puncture. Necropsy confirmed diagnosis.</td>
</tr>
<tr>
<td>3</td>
<td>Primary CNS</td>
<td>1</td>
<td>2</td>
<td>NA</td>
<td>Died 3 weeks later. No necropsy.</td>
</tr>
<tr>
<td>4</td>
<td>Systemic, disseminated extraneural</td>
<td>1</td>
<td>1</td>
<td>NA</td>
<td>Died 6 weeks later. Cranial MR scan normal but EBV DNA detected in cell free CSF. No necropsy.</td>
</tr>
<tr>
<td>5</td>
<td>Systemic, extra neural</td>
<td>1</td>
<td>1</td>
<td>NA</td>
<td>Alive. Cranial MR scan normal. Treated with local RT and HAART. No lymphoma recurrence after 39 months follow up.</td>
</tr>
</tbody>
</table>

CNS = central nervous system. NA = not applicable. EBV = Epstein–Barr virus. CSF = cerebrospinal fluid. MR = magnetic resonance. RT = radiotherapy. HAART = highly active antiretroviral therapy.
A catalogue of publications is available online (www.paho.org). The monthly journal of PAHO, the Pan American Journal of Public Health, is also available (subscriptions: pubsvc@tsp.sheridan.com).

Imperial College School of Medicine, Division of Paediatrics, Obstetrics and Gynaecology, symposium on Maternal Mental Health and the Child, 12 October 2000
Further details: Symposium Office, Imperial College School of Medicine, Queen Char-lotte’s and Chelsea Hospital, Goldhawk Road, London W6 0XG, UK (tel: +44 (0) 20 8383 3904; fax: +44 (0) 20 8383 8555; email: sympreg@ic.ac.uk).

11th Regional Meeting of International Union against Sexually Transmitted Infections, South East Asian and Western Pacific Branch and 24th National Conference of Indian Association for the Study of Sexually Transmitted Diseases and AIDS, 13–15 October 2000, Chandigarh, India
Further details: Dr Bhushan Kumar, Organising Secretary, 11th Regional Meeting of IUSTI–Asia Pacific (SE Asia and W Pacific Branch), Department of Dermatology, Ve-nerology and Leprosy, PGIMER, Chandigarh – 160 012, India (tel: +91 (0172) 745330; fax: +91 (0172) 744401/745078; email: kumarbhushan@hotmail.com).

New Zealand Venereology Society Conference, Centennial Convention Centre, Palmerston North, New Zealand, 18–20 October 2000
Ka Hikotia Ka Koreroa Mo Te Tua Rua Mano (Maori) ‘Talk the Talk 2000.’ Further details: Sue Peck, Conference Organiser, SP Conference Management, PO Box 4400, Palmerston North, New Zealand (tel: 64 0 41 156 464; fax: 64 0 41 143 162; email: suepeck@xtra.co.nz).

Imperial College School of Medicine, Division of Paediatrics, Obstetrics and Gynaecology, symposium on Women and Children with HIV and AIDS, 20 October 2000
Further details: Symposium Office, Imperial College School of Medicine, Queen Char-lotte’s and Chelsea Hospital, Goldhawk Road, London W6 0XG, UK (tel: +44 (0) 20 8383 3904; fax: +44 (0) 20 8383 8555; email: sympreg@ic.ac.uk).

Imperial College School of Medicine, Division of Paediatrics, Obstetrics and Gynaecology, symposium on key issues in the Care of Women and Gynaecologi- cal Gancers (for nurses), 30 October 2000
Further details: Symposium Office, Imperial College School of Medicine, Queen Char-lotte’s and Chelsea Hospital, Goldhawk Road, London W6 0XG, UK (tel: +44 (0) 20 8383 3904; fax: +44 (0) 20 8383 8555; email: sympreg@ic.ac.uk).

Consortium of Thai Training Institutes for STDs and AIDS—International Re-union and Refresher Course on Sexual Health, Lee Garden Plaza Hotel, Hat Yai, Thailand 24–26 November 2000
Further details: Hat Yai Secretariat, Dr Verapol Chandyeng, Dept of OB–GYN, Fac-ulty of Medicine, Prince of Songkla Univer-sity, Hat Yai, Songkla 90110, Thailand (fax: +66 (0) 246 396; email: cverapol@ ratree.psu.ac.th). Further details: ECEAR ‘2001 Conference (at Wolfson Conference Centre), 13–17 November 2000
Further details: Symposium Office, Imperial College School of Medicine, Queen Char-lotte’s and Chelsea Hospital, Goldhawk Road, London W6 0XG, UK (tel: +44 (0) 20 8383 3904; fax: +44 (0) 20 8383 8555; email: sympreg@ic.ac.uk).

Call for papers—6th European Forum on Quality Improvement in Health Care, 29–31 March 2001, Bologna, Italy
Further details: BMA/BMJ Conference Unit, BMA House, Tavistock Square, London WC1H 9JP, UK (tel: +44 (0) 20 7383 6409; fax: +44 (0) 20 7383 6869; email: quality@bma.org.uk; website: www.quality.bmj.com).

Further details: ECEAR ’2001 Conference Secretary, Division of Retrovirology, NIBSC, Blanche Lane, South Mimms, Potters Bar, Herts, EN6 3QG, UK.
The paper by Hughes et al. “Comparison of risk factors for four sexually transmitted infections: results from a study of attenders at three genitourinary medicine clinics in England” published in the August issue of STI (2000;76:262–7) contained errors in tables 1 and 2. The correct versions of these tables are published here. The multivariable statistical analyses presented in tables 3 and 4, on which the paper focuses and on which the discussion and conclusions are based, are unaffected by the errors and remain unchanged.

### Table 1
Characteristics of patients attending three GUM clinics in England, April 1994 to September 1997

<table>
<thead>
<tr>
<th></th>
<th>Royal Hallamshire, Sheffield (%)</th>
<th>St Thomas’s, London (%)</th>
<th>Mortimer Market Centre (MMC), London (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total attenders</td>
<td>20 334</td>
<td>15 155</td>
<td>15 882</td>
</tr>
<tr>
<td>Sex:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9 992 (49)</td>
<td>7 969 (53)</td>
<td>7 843 (51)</td>
</tr>
<tr>
<td>Female</td>
<td>10 314 (51)</td>
<td>7 186 (47)</td>
<td>7 659 (48)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>28 (&lt;1)</td>
<td>–</td>
<td>80 (1)</td>
</tr>
<tr>
<td>Age group:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13–15</td>
<td>189 (1)</td>
<td>64 (&lt;1)</td>
<td>20 (&lt;1)</td>
</tr>
<tr>
<td>16–19</td>
<td>3 319 (11)</td>
<td>977 (6)</td>
<td>671 (4)</td>
</tr>
<tr>
<td>20–24</td>
<td>5 672 (28)</td>
<td>3 199 (21)</td>
<td>3 390 (21)</td>
</tr>
<tr>
<td>25–34</td>
<td>7 809 (38)</td>
<td>7 425 (49)</td>
<td>7 658 (48)</td>
</tr>
<tr>
<td>35+</td>
<td>4 254 (21)</td>
<td>3 485 (23)</td>
<td>4 135 (26)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>91 (&lt;1)</td>
<td>5 (&lt;1)</td>
<td>8 (&lt;1)</td>
</tr>
<tr>
<td>Male sexual orientation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>9 181 (92)</td>
<td>6 744 (85)</td>
<td>2 176 (27)</td>
</tr>
<tr>
<td>Homosexual/bisexual</td>
<td>800 (8)</td>
<td>1 174 (15)</td>
<td>1 751 (22)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>11 (&lt;1)</td>
<td>51 (1)</td>
<td>4 216 (52)</td>
</tr>
<tr>
<td>Female sexual orientation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>10 145 (98)</td>
<td>7 057 (98)</td>
<td>4 001 (52)</td>
</tr>
<tr>
<td>Homosexual/bisexual</td>
<td>165 (2)</td>
<td>89 (1)</td>
<td>96 (1)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>4 (&lt;1)</td>
<td>40 (1)</td>
<td>3 562 (47)</td>
</tr>
<tr>
<td>Ethnic group:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>18 014 (89)</td>
<td>8 383 (55)</td>
<td>8 629 (54)</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>1 038 (5)</td>
<td>4 308 (28)</td>
<td>433 (3)</td>
</tr>
<tr>
<td>Black African</td>
<td>140 (1)</td>
<td>1 611 (11)</td>
<td>435 (3)</td>
</tr>
<tr>
<td>Asian</td>
<td>483 (2)</td>
<td>496 (3)</td>
<td>506 (3)</td>
</tr>
<tr>
<td>Other/mixed</td>
<td>297 (1)</td>
<td>357 (2)</td>
<td>498 (3)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>362 (2)</td>
<td></td>
<td>5 381 (34)</td>
</tr>
<tr>
<td>Presenting diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genital warts</td>
<td>1 976 (10)</td>
<td>963 (6)</td>
<td>619 (4)</td>
</tr>
<tr>
<td>Genital HSV</td>
<td>548 (3)</td>
<td>433 (3)</td>
<td>265 (2)</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>389 (2)</td>
<td>559 (4)</td>
<td>285 (2)</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>2 275 (11)</td>
<td>752 (5)</td>
<td>633 (4)</td>
</tr>
<tr>
<td>Number of partners</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(heterosexuals): 0-1</td>
<td>10 353 (53)</td>
<td>7 299 (53)</td>
<td>2 897 (47)</td>
</tr>
<tr>
<td>2</td>
<td>5 027 (26)</td>
<td>3 541 (26)</td>
<td>1 611 (26)</td>
</tr>
<tr>
<td>3</td>
<td>3 045 (20)</td>
<td>2 802 (20)</td>
<td>1 669 (27)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>13 (&lt;1)</td>
<td>159 (1)</td>
<td>–</td>
</tr>
<tr>
<td>Previous STI: Yes</td>
<td>5 791 (28)</td>
<td>5 807 (38)</td>
<td>3 483 (22)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>–</td>
<td>3 (&lt;1)</td>
<td>7 533 (47)</td>
</tr>
<tr>
<td>Ever injected drugs:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>361 (2)</td>
<td>228 (2)</td>
<td>145 (1)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>2 (&lt;1)</td>
<td></td>
<td>7 486 (47)</td>
</tr>
<tr>
<td>Commercial sex work:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>543 (3)</td>
<td>181 (1)</td>
<td>–</td>
</tr>
<tr>
<td>Not recorded</td>
<td>–</td>
<td>15 155 (100)</td>
<td>7 641 (48)</td>
</tr>
</tbody>
</table>

1 Data for 1 April 1994 to 30 September 1997.
2 Data for 1 April 1994 to 31 December 1996.
3 Data for 1996 only.
4 Includes “black other.”
5 First episode.
6 Uncomplicated infection.
7 Number of partners in past 12 months for Sheffield and St Thomas’s clinics and in past 3 months for MMC (see methods for details).

### Table 2
Numbers of attenders diagnosed with first episode genital warts, first episode genital HSV, uncomplicated gonorrhoea and uncomplicated chlamydia, showing concurrent infections, in attenders at three GUM clinics in England, April 1994 to September 1997 (+ = present, − = absent)

<table>
<thead>
<tr>
<th>No of attenders (%)</th>
<th>Warts</th>
<th>HSV</th>
<th>Gonorrhoea</th>
<th>Chlamydia</th>
</tr>
</thead>
<tbody>
<tr>
<td>3320 (6.46)</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3101 (6.04)</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>1184 (2.30)</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>957 (1.86)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>233 (0.43)</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>187 (0.36)</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>28 (0.05)</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>21 (0.04)</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>21 (0.04)</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>11 (0.02)</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>9 (0.02)</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>2 (0.00)</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>42 297 (82.34)</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Total 51 371 (100)</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
Chlamydia

Duration of untreated genital infections with Chlamydia trachomatis—a review of the literature.


Urogenital Chlamydia trachomatis serovars in men and women with a symptomatic or asymptomatic infection: an association with clinical manifestations?


Relationship of hormonal contraception and cervical ectopy as measured by computerized planimetry to chlamydial infection in adolescents.

DL JACOBSON, L PERALTA, M FARMER et al. Sex Transm Dis 2000;27:313–9

Pooling cervical swabs and testing by ligase chain reaction are accurate and cost-saving strategies for diagnosis of Chlamydia trachomatis.


Reproducibility problems with the Abbott Laboratories LCx assay for Chlamydia trachomatis and Neisseria gonorrhoeae.

AM GRONOWSKI, S COPPER, D BAORTO, PR MURRAY. J Clin Microbiol 2000;38:2416–8

An important proportion of genital samples submitted for Chlamydia trachomatis detection by PCR contain small amounts of cellular DNA as measured by β-globin gene amplification.


Effects of estradiol and progesterone on susceptibility and early immune responses to Chlamydia trachomatis infection in the female reproductive tract.

C KAUSCH, F ZHOU, AD MURDIR, CR WIRA. Infect Immun 2000;68:4207–16

Priming with Chlamydia trachomatis major outer membrane protein (MOMP) DNA followed by MOMP ISCOM boosting enhances protection and is associated with increased immunoglobulin A and Th1 cellular immune responses.


Genetic differences in the Chlamydia trachomatis tryptophan synthase α-subunit can explain variations in serovar pathogenesis.


Role of hyphal formation in interactions of Candida albicans with endothelial cells.


Measurement of T-cell-derived antigen binding molecules and immunoglobulin G specific to Candida albicans mannan in sera of patients with recurrent vulvovaginal candidiasis.


Evidence for mating of the ‘asexual’ yeast Candida albicans in a mammalian host.

CM HULL, RM RAINIER, AD JOHNSON. Science 2000;289:307–9

Bacterial vaginosis

The Papanicolaou smear: inadequate screening test for bacterial vaginosis during pregnancy.


Identification of a human lactoferrin-binding protein in Gardnerella vaginalis.


Trichomoniasis

A randomized trial of intravaginal nonoxynol 9 versus oral metronidazole in the treatment of vaginal trichomoniasis.

NM ANTEONELLI, SJ DEHIL, JW WRIGHT. Am J Obstet Gynecol 2000;182:1008–10

Host and tissue specificity of Trichomonas vaginalis is not mediated by its known adhesion proteins.


18S ribosomal DNA-based PCR for diagnosis of Trichomonas vaginalis.


Syphilis and other treponematoses

Tracing a syphilis outbreak through cyberspace.


Strategies for syphilis prevention—findings from surveys in a high-incidence area.

TA FARLEY, RH KAHM, GM JOHNSON, DA COHEN. Sex Transm Dis 2000;27:305–10

Editorial: syphilis—a barometer of community health.

JN WASSEMAT. Sex Transm Dis 2000;27:311–2

Use of synthetic cardiolipin and lecinthin in the antigen used by the Venerable Disease Research Laboratory Test for serodiagnosis of syphilis.


Comparison of the Serodia Treponema pallidum particle agglutination, Captia syphilis-G and Spirotek Reagin II tests with standard test techniques for diagnosis of syphilis.


Treponema pallidum subsp pertenue displays pathogenic properties different from those of T pallidum subsp pallidum.


Hepatitis

Detection of hepatitis C virus in the semen of infected men.


JG FELDMAN, H MINKOFF, L LANDESMAN, J DEHOVITZ. Sex Transm Dis 2000;27:338–42

The natural history of hepatitis C virus infection—host, viral and environmental factors.

DL THOMAS, J ASTEMBORSKI, RM RAI et al. JAMA 2000;284:450–6

Herpes

Herpes simplex virus in the human cornea.

HC DUA. Br J Ophthalmol 2000;84:560

Further evidence from a murine infection model that famciclovir interferes with the establishment of HSV-1 latent infections.

AM THACKRAY, H FIELD. J Antimicrob Chemother 2000;45:825–34

Comparison of virus isolation and various polymerase chain reaction methods in the diagnosis of mucocutaneous herpesvirus infection.


Comparison of a monoclonal antibody-blocking enzyme-linked immunosassay and a strip immunoblot assay for identifying type-specific herpes simplex virus type 2 serological responses.


Long term persistence of herpes simplex virus-specific CDS(+) CTL in persons with frequently recurring genital herpes.

Immune protection against HSV-2 in B-cell-deficient mice.

Decreased vaginal disease in J-chain-deficient mice following herpes simplex type 2 genital infection.

The role of the UL41 gene of herpes simplex virus type 1 in evasion of non-specific host defence mechanisms during primary infection.

Difference in incidence of spontaneous mutations between herpes simplex virus types 1 and 2.

**Human papillomavirus infection**

Quantitative tests for human papillomavirus.
C JOHNSTON. *Lancet* 2000;355:2179

Viral load of human papillomavirus 16 as determinant for development of cervical carcinoma in situ: a nested case-control study.

Consistent high viral load of human papillomavirus 16 and risk of cervical carcinoma in situ: a nested case-control study.

Mathematical model for the natural history of human papillomavirus infection and cervical carcinogenesis.

Human papillomavirus DNA testing for cervical cancer screening in low-resource settings.

Human papillomavirus testing in women with mild cytologic atypia.

Mucosal human papillomavirus types in squamous cell carcinomas of the uterine cervix and subsequently on fingers.
O FORSLUND, P NORDIN, RG HANSSON. *Br J Dermatol* 2000;142:1148–53

Distribution of 37 mucosotropic HPV types in women with cytologically normal cervical smears: the age-related patterns for high-risk and low-risk types.
MV JACOBS, MM WALKERMARKS, PW SNEDERS et al. *Int J Cancer* 2000;87:221–7

Cervical neoplasia and repeated positivity of human papillomavirus infection in human immunodeficiency virus-seropositive and -seronegative women.

Genital human papillomavirus infection and associated penile intraepithelial neoplasia in males infected with the human immunodeficiency virus.
M GOMOUSAMIARAI, G GIALAMA, N DOMOCHAS, G GIALAMA. *Acta Cytol* 2000;44:301–4

Cost-effectiveness of screening for anal squamous intraepithelial lesions and anal cancer in human immunodeficiency virus-negative homosexual and bisexual men.

Human papillomavirus infection in atrophic smears—a case report.

Imiquimod: an immune response modifier.
*J Am Acad Dermatol* 2000;43:whole issue

Correlation between pretreatment levels of interferon response genes and clinical responses to an immune response modifier (Imiquimod) in genital warts.

Comparison of human papillomavirus types 16, 18 and 6 capsid antibody responses following incident infection.

Absence of antibody against human papillomavirus type 16 E6 and E7 in patients with cervical cancer is independent of sequence variations.
I NINDL, K ZUMBAICH, M PAWLITA et al. *J Infect Dis* 2000;181:1764–76

A new PCR-based assay amplifies the E6-E7 genes of most mucosal human papillomaviruses (HPV).

The human papillomavirus type 16 E7 oncoprotein is required for the productive stage of the viral life cycle.

Cervical lesions are associated with high-risk human papillomavirus type 16 intraparitary variants that have high transcriptional activity and increases usage of common mammalian codons.

Minor capsid protein of human genital papillomaviruses contains subdominant, cross-neutralizing epitopes.

Abnormalities of cornified cell envelopes isolated from human papillomavirus type 11-infected genital epithelium.
DR BROWN, JT BRYAN. *Virology* 2000;270:65–70

Inverse relationship between the expression of the human papillomavirus type 16 transcription factor E2 and virus DNA copy number during the progression of cervical intraepithelial neoplasia.

8-hydroxyl-2'-deoxyguanosine in cervical cells: correlation with grade of dysplasia and human papillomavirus infection.

Immune responses induced by BCG re-combinant for human papillomavirus L1 and E7 proteins.

Uneven distribution of HPV 16 E6 prototype and variant (83V) oncprotein in cervical neoplastic lesions.

Analysis of relative binding affinity of E7-pkB of human papillomavirus 16 variants using the yeast two-hybrid system.

The E1 helicase of human papillomavirus type 11 binds to the origin of replication with low sequence specificity.

Suprabasal expression of the human papillomavirus type 16 oncoproteins in mouse epidermis alters expression of cell cycle regulatory proteins.

Induction of apoptosis in human papillomavirus-positive cancer cells by peptide aptamers targeting the viral E6 oncoprotein.

Binding of the human papillomavirus type 16 E7 oncoprotein and the adenovirus-associated virus Rep78 major regulatory protein in vitro and in yeast and the potential for downstream effects.


A functional NF-kB binding site in the human papillomavirus type 16 long control region.

Identification of domains of the HPV1 E1 protein required for DNA replication in vitro.
Cervical cytology and colposcopy

Management guidelines for women with normal colposcopy after low grade cervical abnormalities: population study.
GR TEAL, SS MOFFITT, CH MANN, DM LUESLEY.
BMJ 2000;320:1693–6

Accuracy of the Papanicolaou test in screening for and follow-up of cervical cytologic abnormalities: a systemic review.

The borderline cervical smear: colposcopic and biopsy outcome.
A ALNANFI, G REBELLO, R ALYUSIF, E MOOGAN.

Combined Pap smear, cervicography and HPV DNA testing in the detection of cervical intraepithelial neoplasia and cancer.

Comparison of endocervical curettage and endocervical brushing.

Laser scanning confocal microscopy of cervical tissue before and after application of acetic acid.

Cervical intraepithelial neoplasia outcomes after large loop excision with clear margins.

Cyclin E expression and early cervical neoplasia in ThinPrep specimens—a feasibility study.

Other sexually transmitted infections

Features of urethritis in a cohort of male soldiers.

High prevalence of Epstein-Barr virus type 2 among homosexual men is caused by sexual transmission.

Seropositivity to human herpesvirus 8 in relation to sexual history and risk of sexually transmitted infections among women.


Promotion of condom use in a high-risk setting in Nicaragua: a randomized controlled trial.

A randomized trial of hierarchical counselling in a short, clinician-based intervention to reduce the risk of sexually transmitted diseases in women.

Microbiology and immunology

Role played by lactobacilli in controlling the population of vaginal pathogens.
S BORIS, C BARBES. Microbes Infect 2000;2:543–6

The immune responses to bacterial antigens encountered in vivo at mucosal surfaces.

Dermatology

Vulvitis circumscripta plasmacellularis mimicking child abuse.

Two cases of vulval pigmented extramammary Paget’s disease: histochemical and immunohistochemical studies.

Miscellaneous

Syndromic treatment of sexually transmitted diseases reduces the proportion of incident HIV infections attributable to these diseases in rural Tanzania.
KK ORROTH, A GAYVOLI, J TODD et al. AIDS 2000;14:1249–38

Control of sexually transmitted diseases for HIV-1 prevention: understanding the implications of the Mwanza and Rakai trials.

Sexually transmitted diseases and the increased risk for HIV transmission: implications for cost-effectiveness analyses of sexually transmitted disease prevention interventions.

The challenge of sexually transmitted diseases for the military: what has changed?

Reducing risk of sexually transmitted disease and human immunodeficiency virus infection in a military STD clinic: evaluation of a randomised preventive intervention trial.

Assessing the burden of sexual and reproductive ill-health: questions regarding the use of disability-adjusted life years.

Integration of prevention and care of sexually transmitted infections with family planning services: what is the evidence for public health benefits?

Emergency contraception: advance provision in a young, high-risk clinic population.

Prevalence of home pregnancy testing among adolescents.

Sexually transmitted diseases and sexual behaviour in men attending an outpatients’ clinic for gay men in Gothenburg, Sweden.
MAD CHRISTIANSEN, GB LOWHAGEN. Acta Derm Venereol 2000;80:136–9

Adverse childhood experiences and sexually transmitted diseases in men and women: a retrospective study.
SD HILLS, RF ANDA, RF FELITTI, D NORDENBERG, PA MARCHBANKS. Pediatrics 2000;106:U12–U17

Identification of female cells in postcoital penile swabs using fluorescence in situ hybridisation—application in sexual assault.
KA COLLINS, SJ CINA, MM PETTENAI. Arch Pathol Lab Med 2000;124:1080–2
Fluctuation in lower urinary tract symptoms in women—reassurance and watchful waiting can prevent overtreatment.
S HUNSKAAR. BMJ 2000;320:1418

Incidence and remission rates of lower urinary tract symptoms at one year in women aged 40–60: longitudinal study.

Effect of a three month course of ciprofloxacin on the outcome of reactive arthritis.

Reactive arthritis: the result of an anti-idiotypic immune response to a bacterial lipopolysaccharide antigen where the idiotype has the immunological appearance of a synovial antigen.

Detection of Kaposi’s sarcoma-associated herpesvirus in oral and genital secretions of Zimbabwean women.

Effect of intravaginal practices on the vaginal and cervical mucosa of Zimbabwean women.

Polyherbal formulations with wide spectrum antimicrobial activity against reproductive tract infections and sexually transmitted pathogens.

Bacteriology and treatment of malodorous lower reproductive tract in gynaecologic cancer patients.

Association of Ureaplasma urealyticum with abnormal reactive oxygen species levels and absence of leukocytospermia.

Acute vulvar vestibulitis occurring during chemotherapy with cyclophosphamine analogue LY355703.
TM DEPAS, M MANDALA, G CURIGLIANO, F PECCATORI. Obstet Gynecol 2000;95:1030

Drug therapy: erectile dysfunction.

Effect of erectile dysfunction on frequency of intercourse: a population based prevalence study in Finland.
J KOSIKAMI, M HAKAMA, H HUHITALA, TLI TAMMELA. J Urol 2000;164:367–70

Peyronie’s disease: etiology, medical and surgical therapy.

Evidence based assessment of long-term results of plaque incision and vein grafting for Peyronie’s disease.

Safety and acceptability of a baggy latex condom.

Tuberculosis of the penis after intravesical bacillus Calmette-Guerin treatment.
JM LATINI, DS WANG, P FORGACS, W BEHRIE. J Urol 2000;163:1870

Clinical management of foreign bodies of the genitourinary tract.

Genital diseases in the Peruvian dusky dolphin (Lagenorhynchus obscurus).
MF VANBRESSEM, K VANWAEREBEEK, U SIEBERT et al. J Comparative Pathol 2000;122:266–77

Scrotal dog bites.