HIV and circumcision: new factors to consider

Kebaabetswe et al obviously believe the conventional wisdom that heterosexual sex is the major vector for the transmission/reception of HIV, and that male circumcision is an effective deterrent to infection. Based on that belief, they have constructed an elaborate and persuasive study of the acceptability of circumcision as a prophylactic measure in Botswana. Furthermore, they argue for a programme of neonatal circumcision in Botswana in the hope of reducing the HIV infection rate 15 years later.1

Discussion

It has been believed since about 1988 that heterosexual coitus accounts for 90% of the HIV infection in Africa.2 Many studies do argue that circumcision can reduce the transmission of HIV through heterosexual coitus. The quality of these studies has been criticised for their methodological flaws, including their failure to control for numerous confounding factors.3,4

Several authors argue that transmission by coitus “is unlikely to account for the explosive HIV-1 epidemic in sub-Saharan Africa.”5 It now appears that these studies have not accounted for the largest confounding factor of all—iatrogenic transmission of HIV. Earlier this year the International Journal of STD & AIDS published a trilogy of articles.6,7,8 These articles strongly argue that unsafe healthcare practices, especially non-sterile injections, not heterosexual intercourse, are the principal vectors by which HIV is transmitted. A programme of mass circumcision would be ineffective against iatrogenic transmission of HIV through unsafe health care.

Heterosexual transmission of HIV that one sees in Africa also cannot explain the incidence of HIV in children.9

Circumcision has some little known effects that may promote rather than deter HIV infection. The human foreskin has physiological functions designed to protect the human body from infection. The sub-preputial moisture contains lysozyme—an enzyme that attacks HIV.10 Circumcision destroys this natural protection.

Circumcision removes erogenous tissue,11 desensitises the penis,12 changes sexual behaviour, and makes males more likely to engage in unsafe sex practices.13 Circumcised males, therefore, are less willing to use additionally desensitising condoms.

Male circumcision produces hardened scar tissue that encircles the shaft of the penis. The scar scrapes the inside of the partner’s vagina during coitus and, therefore, may enhance the transmission/reception of HIV.

A programme of mass circumcision would expose African males to unsafe genital cutting, would destroy the natural protection of the foreskin,14 would not be effective against iatrogenic unsafe health care,1 would divert scarce medical and social resources from measures of proved effectiveness,1 and, therefore, is likely to increase the transmission of HIV.

The proportion of HIV infection attributable to heterosexual intercourse has been placed at 90%.15 Gisselquist and Potterat now estimate the proportion attributable to heterosexual intercourse at about 70%—only a third of the previous estimate.

Circumcision has not yet been shown to be an effective deterrent against HIV infection.16 The Council on Scientific Affairs of the American Medical Association says that “circumcision cannot be responsibly viewed as ‘protecting’ against such infections.”17 The Task Force on Circumcision of the American Academy of Pediatrics identifies behavioural factors, not lack of circumcision, as the major cause of HIV infection.18

The article by Kebaabetswe et al seems to show a strong cultural bias on the part of the authors in favour of circumcision. This may be due to their desire to preserve their culture of origin.19

Bioethics and human rights

Finally, we would like to address the legal and ethical issues. As noted above, male circumcision excises a large amount of functional healthy erogenous tissue from the penis.20 It is a clear violation of the human right to security of the person.21

Several authorities report that circumcision degrades the erectile function of the penis.22,23 Circumcision, therefore, must be regarded as degrading treatment. Degrading treatment is an additional violation of human rights.24

The leading international statement of medical ethics is the European Convention on Human Rights and Bioethics.25 Article 20(1) prohibits non-therapeutic tissue removal from those who do not have the capacity to consent. Children have a right to the protection of the security of their persons26 and to protection from degrading treatment.27 Circumcision would violate those human rights. Doctors must respect patient human rights. Prophylactic circumcisions ethically may not be carried out on minors. Circumcisions, therefore, would have to be limited to adult males who legally may give informed consent.

Political factors

Ntozi warns: “It is important that, while circumcision interventions are being planned, several points must be considered carefully. If the experiment fails, Africans are likely to feel abused and exploited by scientists who recommend the circumcision policy. In a region highly sensitive to previous colonial exploitation and suspicious of the biological warfare origin of the virus, failure of circumcision is likely to be a big issue. Those recommending it should know how to handle the political implications.”28

Approval of circumcision by the surveyed Botswana people apparently is based on their belief that circumcision is efficacious in preventing the spread of HIV. If circumcision fails to control HIV, there would be disillusionment and anger. African males would have sacrificed their erogenous tissue for a false hope of preventing HIV infection. There is no evidence that Kebaabetswe et al have considered the political issues that would arise if a circumcision experiment should fail.

Conclusion

Kebaabetswe et al propose the universal circumcision of male children in Botswana. They accept without question that HIV is primarily sexually transmitted in Africa by heterosexual coitus and that circumcision reduces or prevents the transmission of HIV; however, medical authorities do not accept the evidence of this.29,30

Kebaabetswe et al propose to provide in-hospital circumcision of male children in Botswana. However, there is already a substantial incidence of infection among children in South Africa as a result of iatrogenic infection from non-sterile injections, etc.31 They have not shown that safe, aseptic circumcisions can be delivered in Botswana. A programme of mass circumcision would destroy the natural protections of the foreskin, further expose children to an apparently unsafe healthcare system, and would be more likely to increase than decrease infection.

Even if circumcision eventually should be shown to provide some protection against HIV infection, that protection could only work to reduce the 30% of infections that now are attributed to sexual activity. It would have no effect on the other 70%. Its effect, therefore, would be minimal at best and could not have an effect for the first 15 years, during which time behavioural changes could be introduced into society through education, and a HIV vaccine could be developed to provide immunity.

Circumcision of male children with the intent of reducing an epidemic not of their making is unacceptable from medical, ethical, and legal perspectives. As a public health
measure, male neonatal circumcision fails all tests.36

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References

Coexistent cranial tuberculomas and tuberculosis of the cervix in a postmenopausal woman

Postmenopausal genital tuberculosis, especially tuberculosis of the cervix, is rare. We present a case of a postmenopausal woman presenting with multiple cranial lesions and evidence of a silent granulomatous pathology in the cervix.

Case report
A 52 year old woman was admitted with complaints of increasing headaches and generalised weakness for the past 3 months. There were no other neurological symptoms and she denied any history of fever, cough, diarrhoea, bone pains, vaginal discharge, bleeding, dyspareunia, abdominal discomfort, or weight loss. She was postmenopausal for 2 years with a normal menstrual history previously. There was no history of extramarital sexual contacts or any venereal disease in the patient or her spouse. Examination of cardiovascular, chest, abdomen, and nervous system was unremarkable. Brain examination was normal. Gynaecological examination revealed absence of plectyosis, and normal sugar and protein indices. No organism was identified on staining or culture. Serology for brucellosis, toxoplasmosis, and cysticercosis was negative in both CSF and serum. A Mantoux test was performed but was negative. Ultrasound of the abdomen revealed calcification in the region of the cervix. Chest x-ray, computed tomography (CT) of the abdomen, pelvis and chest, colonoscopy, and barium meal follow through study were normal. ELISA for HIV was non-reactive. The cervix biopsy revealed hyperplastic squamous epithelium, epitheloid cell granulomas with central necrosis, and Langhan’s type of giant cells (fig 2). Staining for acid fast bacilli and fungus was negative. Culture of the tissue did not grow any organism. The patient was started on four drug antitubercular therapy (ATT) with oral steroids. Repeat examination of the cervix was normal after 3 months and repeat cranial MRI done at intervals thereafter has shown resolution of lesions.

Comment
Both central nervous system (CNS) tuberculosis and genital tract tuberculosis are observed in endemically affected populations. Usually, the primary focus is elsewhere, the most common being the lung, and is silent by the time the disease manifests in the CNS or the genital tract. An accurate estimate of the incidence of genital tuberculosis is difficult because of infected asymptomatic carriers4 with genital tuberculosis being diagnosed more in relation to infertility.4 Postmenopausal genital tuberculosis is uncommon, possibly because of hormone dependence of infection and reduced blood supply at younger ages.4 Tubercular cervicitis is rare with an approximate incidence of 2.5–10% of all genital tuberculosis.4 Primary involvement of the cervix is still rarer, and is thought to be either sexually transmitted through a partner with epididymo-orchitis or through his infected sputum used as a lubricant.4 Tuberculomas are circumscribed focal granulomatous masses of tubercular origin, which may be single or multiple, vary in size, perilesional oedema or meningitis reaction, produce variable clinical features, and are uncommon at extremes of age.4 CSF examination and polymerase chain reaction may be normal in pure parenchymal forms of CNS tuberculosis.4 Tubercular bacilli may be scant in hypertrophied cervix and lead to a negative acid fast bacilli stain and culture.4

In the present case, we were considering both an infective as well as a mitotic pathology. Since women are known to

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Figure 1 Cranial MRI, post-contrast sagittal section showing ring enhancing lesions (arrows) in the cerebral hemispheres and cerebellum.

Figure 2 Histopathology of the cervix biopsy specimen showing multiple epithelioid cell granulomas (large arrow) with giant cells (small arrow).
harbour asymptomatic genital tuberculosis, a thorough clinical examination can be helpful in the presence of cranial lesions with a wide differential diagnosis.

Contributors
RB, SP, PS, DS, SG were following this patient clinically; RS provided the pathology details and the image; the manuscript was written by RB and read, edited, and finalised by all authors.

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References

Table 1 Seroprevalence of RTI in the various groups of women

<table>
<thead>
<tr>
<th>Tests positive</th>
<th>Group I (n = 600)</th>
<th>Group II (n = 378)</th>
<th>Group III (n = 525)</th>
<th>Group IV (n = 464)</th>
<th>Group V (n = 288)</th>
<th>Group VI (n = 271)</th>
<th>Total (n = 2526)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syphilis</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>17</td>
<td>(0.67%)</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(0.00%)</td>
</tr>
<tr>
<td>C trachomatis infection</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>(0.43%)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>9</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>(0.16%)</td>
</tr>
<tr>
<td>HIV</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>4</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>4</td>
<td>46 (1.82%)</td>
</tr>
</tbody>
</table>

Group I, pregnant women; group II, contraceptive advice seekers; group III, contraceptive users; group IV, women with infertility; group V, women with leucorrhoea; group VI, women with diagnosis of pelvic inflammatory disease.

Seroprevalence of reproductive tract infections in women in northern India—a relatively low prevalence area

Recent years have witnessed a growing concern about the reproductive tract infections (RTI), especially those that are sexually transmitted. The serious threat of AIDS has further drawn attention to the importance of RTI sexually transmitted diseases (STD), especially in developing countries like India where RTI diagnosis and treatment facilities are extremely limited. Women with RTI are asymptomatic, which if undetected or untreated can lead to complications in the index woman. It is, therefore, worthwhile screening of all women of reproductive age for various RTI so that appropriate interventions can be planned and initiated.

We analysed a total of 2526 women attending the antenatal outpatient department of obstetrics and gynaecology of Nehru Hospital attached to Post Graduate Institute of Medical Education and Research, Chandigarh, for screening of RTI during a 3 year period. This project was approved by the institute’s ethics committee. The women were divided into six groups based on clinical histories and various signs and symptoms: group I, pregnant women (n = 600); group II, contraceptive advice seekers (n = 378); group III, contraceptive users (n = 525); group IV, women with infertility (n = 464); group V, women with leucorrhoea (n = 288); group VI, women with a diagnosis of pelvic inflammatory disease.

In the present study, serological diagnosis of various RTI was done by ELISA and latex agglutination test (LAT). Serum samples were collected from all women, sera were sent to the microbiology laboratory for Gram stain, culture of N gonorrhoea (New York city medium), ELISA was also carried out for antigen detection of N gonorrhoea (Abbott laboratories) and Chlamydia trachomatis (Chlamydia CELISA, Cellabs Pty, Ltd, Brookvale, Australia). Blood samples were collected from all patients and were sent to the microbiology laboratory for Gram stain and culture of Neisseria gonorrhoea (New York city medium). ELISA was also carried out for antigen detection of N gonorrhoea (Abbott laboratories) and Chlamydia trachomatis (Chlamydia CELISA, Cellabs Pty, Ltd, Brookvale, Australia). Venous blood was collected from all women, sera were separated and stored at –20°C till further use. Sera were subjected to the standard Venereal Disease Research Laboratory (VDRL) test and Treponema pallidum haemagglutination test (TPHA) test (Serodia-TPHA, Fujirebio Inc, Tokyo, Japan) for syphilis. ELISA was carried out for the detection of antibodies to C trachomatis (Nichols Institute, New Delhi, India) and N gonorrhoea (Abbott laboratories) (Tsuji et al. 1992; 1998; 74:61–77). A confirmatory test was done in VDRL or TPHA positive sera. Sera were collected from all patients and were sent to the microbiology laboratory for Gram stain, culture of N gonorrhoea (New York city medium). ELISA was also carried out for antigen detection of N gonorrhoea (Abbott laboratories) and Chlamydia trachomatis (Chlamydia CELISA, Cellabs Pty, Ltd, Brookvale, Australia). Venous blood was collected from all women, sera were separated and stored at –20°C till further use. Sera were subjected to the standard Venereal Disease Research Laboratory (VDRL) test and Treponema pallidum haemagglutination test (TPHA) test (Serodia-TPHA, Fujirebio Inc, Tokyo, Japan) for syphilis. ELISA was carried out for the detection of antibodies to C trachomatis (Nichols Institute, New Delhi, India) and N gonorrhoea (Abbott laboratories) (Tsuji et al. 1992; 1998; 74:61–77). A confirmatory test was done in VDRL or TPHA positive sera.

The mean age of the women in the study group was 30.6 years and the parity ranged from 1 to 6. Overall, seroprevalence of RTI in various groups was 1.82% (n = 46,256).

Each of syphilis and hepatitis B infection were found in 17 women (0.67%), followed by C trachomatis in 11 (0.43%) and HIV seropositivity in one (0.02%) (Table 1). Though figures of RTI were quite low, all the infections were more common in the pregnant group compared to the other groups. However, surprisingly, N gonorrhoea was not found in any of the women.

Our study reveals that the prevalence of RTI, especially those that are sexually transmitted, is low. Similarly low prevalence of RTI has been reported from Thailand and Bangladesh. Moreover, a very low prevalence of HIV has earlier been reported from Chandigarh. This is in contrast with studies from the developing world, where prevalence ranges from 30–40% have been reported. Even the low risk populations have a prevalence ranging between 15–20%.

The low prevalence in this region is attributed to the better personal hygiene, environmental conditions, healthy sexual behaviour and good socioeconomic status of the patients residing in this area. However, ours is a tertiary care centre and most cases had been treated before they were referred to this hospital. However, even at such a low prevalence, there are still likely to be cost effective interventions for RTI prevention and care—for example, screening of pregnant women for syphilis may be cost effective when prevalence is 1% in this population.

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Chaperoning in genitourinary medicine: supporting patients and protecting doctors

I read with interest the result of the postal survey regarding chaperoning in genitourinary medicine (GUM) clinics. The notable observation is that female patients were offered a chaperone far more often than male patients (on all occasions when the examiner was a male (32/32) and frequently when the examiner was a female (13/40)). Chaperoning was offered less frequently when the patient was a male with a female examiner (7/37) and infrequently with a male examiner (3/39).

GUM nurses and doctors are particularly vulnerable because the open access of the services exposes them to situations where they have no prior knowledge of the patient’s background, social, behavioural, psychological, or mental state. The vulnerability is accentuated by the fact that sexual history and intimate examination are part of the routine clinical assessment in most of the situations. This vulnerability was called into a course of action in our clinic in 1996 when a senior male clinical assistant was a recipient of allegations (from a male patient in his 50s). The clinical assistant was nearing retirement, after an unblemished long service in general practice, with over 20 years’ experience as an assistant in GUM. The patient expressed extremes of behaviour, grandiose imagination, and swings of mood, which became a reason for clinical concern. The concerns were raised with the patient’s general practitioner (GP) who advised that the patient suffered problems with alcoholism and was undergoing mental rehabilitation, and that he would attend the patient’s condition urgently at home. The GP telephoned the clinic later to indicate that the patient had recovered from his episode and he would like to speak with the consultant GU physician. The patient offered a clear and strong apology regarding what he described as “inappropriate course of behaviour and action” and reiterated that his initial allegations against the senior clinical assistant were, in all, unsafe and untrue.

The incident of false allegations has proved the particular vulnerability of doctors and nurses in the GUM clinic setting. A review of the procedures of chaperoning in the GUM clinic was conducted. The clinic then introduced a system of guidelines whereby all clinical examinations and tests are done in the presence of a chaperone (irrespective of the sex of the patient or the examiner). The nursing staff have realised and appreciated the benefits of attendance to support the patients and to assist the doctors (during the clinical examination and tests). The time spent in the clinical room proved useful in the preparation and labelling of samples. Gaining knowledge about the clinical assessment of clients proved to be valuable to nurses during health advising. The application of the named nurse procedures has meant that the attending nurse would follow the patient all through the clinical assessment, microscopic tests, the introduction of treatment/therapy, and health advising thereafter. This continuity of care is more acceptable to the patient and more satisfactory to the nursing staff.

The issue of funding for chaperoning could be argued under the remit of professional safety. Professionals in other services take stringent methods to protect themselves from what could be less dangerous and damaging situations to their professional careers. Therefore, chaperoning in GUM must be viewed in the light of providing support to patients and protection to staff.

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Reference

STI case management at a South African teaching hospital

In South Africa, KwaZulu-Natal (KZN) is at the centre of the HIV epidemic and sexually transmitted infections (STIs) are endemic in this province. Improving the quality of STI health care causes a cost effective reduction in HIV prevalence and STI incidence. Despite the introduction of national standard treatment guidelines (STGs), based on the syndromic management approach (where antibiotics are prescribed according to algorithms and non-medicinal aspects of care are emphasised), poor case management has been found in rural KZN clinics. This study determined the quality of care received by STI patients at King Edward VIII Hospital (Keh), Durban. As the province’s main academic hospital, KEH has represented the best level of health care for the average citizen of KZN since 1936. Patients with STI are managed syndromically.

The drug treatment of 97 black African outpatients with STI (73% female, average age 29 years) was compared with STGs. Patients also completed a questionnaire assessing non-drug management. Drug treatment complied with STGs in 79% of patients. When assessment included non-drug measures (partner notification cards, condoms, and correct drugs) it fell to 24% compared to 9% for nurses among nurses, with simulated patients in rural KZN clinics. Although overall care appears better in the urban setting, the real difference is at the level of drug treatment (where 79% of 41 received recommended drugs), as in both cases only about a quarter of the patients who had correct drug treatment also received appropriate non-drug care. Patients had appropriate counselling in 56% of cases. This was measured in terms of receiving at least one message in each of the five categories shown in table 1. Despite 72% of patients being encouraged to use condoms, 52 patients were not shown how to do this. Of these, only 31 knew how to use them.

Care givers were interviewed and vignettes were used to compare ideal and actual practice. Barriers to patient care and possible solutions were canvassed. All care givers gave appropriate answers for the ideal management of their fictitious case, but reported a difference between ideal management and actual practice in terms of non-drug aspects of management. All care givers failed to give drug information and to promote health seeking behaviour. Barriers to patient care were lack of time, staffing shortages, and motivation. There was a perception that non-drug management was not the responsibility of the tertiary care giver.

Care givers favoured the option of introducing a packet containing information, condoms, and a referral card, which could be issued with medication. In rural KZN a similar intervention resulted in improved case management in 83% of cases compared with a control group of 12% (p<0.005). Such packets could help improve STI management in this tertiary setting, which has no dedicated STI clinic.

Acknowledgements
The authors wish to thank the interviewers, the staff of KEH, and the patients who participated, as well as Immo Kleinschmidt and Andy Gray who gave statistical advice.

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Table 1

<table>
<thead>
<tr>
<th>Categories of patient counselling showing one important example in each category</th>
<th>Example</th>
<th>“Yes” response (%)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug information</td>
<td>Told to take medicine</td>
<td>65</td>
<td>55 to 74</td>
</tr>
<tr>
<td>Partner referral</td>
<td>Told partner must be treated</td>
<td>56</td>
<td>45 to 66</td>
</tr>
<tr>
<td>Health seeking behaviour</td>
<td>Told about the signs of STI</td>
<td>50</td>
<td>39 to 60</td>
</tr>
<tr>
<td>Risk reduction</td>
<td>Told that STI enhances HIV risk</td>
<td>57</td>
<td>46 to 67</td>
</tr>
<tr>
<td>Condom promotion</td>
<td>Encouraged to use condoms</td>
<td>72</td>
<td>62 to 81</td>
</tr>
</tbody>
</table>
Male circumcision in Britain: findings from a national probability sample survey

Studies from developing countries' and sexually transmitted diseases clinics in developed countries’ show that male circumcision appears to protect against some ulcerative sexually transmitted infections (STIs) and decreases the risk of HIV infection. We used data from the 2000 British National Survey of Sexual Attitudes and Lifestyles (Natsal 2000)—a large scale, stratified, probability sample survey—to estimate the prevalence of male circumcision in Britain and investigate its association with key demographic characteristics, sexual behaviours, and reported STI diagnosis. Natsal 2000 methodology details are published elsewhere. For the purposes of this investigation, data from targeted oversampling of black Caribbean, black African, Indian, and Pakistani groups (the Natsal ethnic minority boost) were combined with the main survey data in order to increase the numbers of these respondents included in the analysis. All data were weighted to be representative of the British population and analyses were performed using Stata version 6.0 to take into consideration Natsal 2000’s complex survey design.

We found 15.8% (95% confidence interval (CI) 14.7 to 17.1) of British men aged 16–44 years reported being circumcised in Natsal 2000. Age specific prevalence was greatest among men aged 40–44 years (19.6%, 95% CI 16.8 to 22.7) compared to those aged 16–19 years (11.7%, 95% CI 9.0 to 15.2). With the exception of black Caribbeans, men from all ethnic minority backgrounds were significantly more likely to report being circumcised compared to men who described their ethnicity as white (adjusting for demographic variables: age, global region of birth, ethnicity, residence in London, religion, and qualifications) adjusted odds ratio (OR) for self reporting ethnicity as other than white 3.02, 95% CI 2.39 to 3.81, p<0.001). In addition, men born abroad instead of in Britain were significantly more likely to be circumcised (adjusting for demographic variables: age, global region of birth, ethnicity, residence in London, religion, and qualifications) adjusted OR 1.74, 95% CI 1.25 to 2.42, p<0.001). Significant (p<0.001) variations in the prevalence of circumcision were also observed across the major religious groups, with prevalence being greatest among Jewish men (98.7%, 95% CI 90.1 to 99.8) and lowest among Hindus, Sikhs, and Buddhists (9.8%, 95% CI 4.7 to 9.3). Relative to uncircumcised men, circumcised men were more likely to report having had homosexual partner(s) (7.5% v 5.3%, p = 0.012) and partners from abroad (19.7% v 13.1%, p<0.001).

We did not find any significant differences in the proportion of circumcised and uncircumcised British men reporting ever being diagnosed with any STI (11.1% compared with 10.8%, p = 0.815), bacterial STIs (6.4% of 5.9%, p = 0.628), or viral STIs (4.7% cf 4.5%, p = 0.786) (table 1). We also found no significant associations between circumcision and being diagnosed with any of the seven specific STIs.

Our findings confirm that the prevalence of male circumcision among British men appears to be declining. This is despite an increase in the proportion of the British population describing their ethnicity as non-white. The lack of association between circumcision status and STI history in this population is consistent with findings from other developed countries and may be because of relatively low prevalence of STIs in this setting, as well as the relatively small proportion of the population who are circumcised.

Acknowledgements

We thank the study participants, the team of interviewers and operations, and computing staff from the National Centre for Social Research who carried out the interviews.

Contributors

SD drafted the paper and participated in the statistical analysis, with contributions from CM, KF, AJ, KW, and RE were co-investigators and participated in the design and management of the main study.

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Table 1 Cumulative incidence of reported previous STI diagnosis by circumcision status among men aged 16–44 years in Britain (Natsal 2000)∗

<table>
<thead>
<tr>
<th></th>
<th>Uncircumcised†%</th>
<th>Circumcised‡%</th>
<th>OR for being circumcised (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any STI</td>
<td>10.8 (9.8 to 12.0)</td>
<td>11.1 (9.0 to 13.7)</td>
<td>1.03 (0.80 to 1.34)</td>
<td>0.815</td>
</tr>
<tr>
<td>Any bacterial STI</td>
<td>5.9 (5.1 to 6.8)</td>
<td>6.4 (4.8 to 8.5)</td>
<td>1.09 (0.77 to 1.55)</td>
<td>0.628</td>
</tr>
<tr>
<td>Any viral STI</td>
<td>4.5 (3.8 to 5.3)</td>
<td>4.7 (3.4 to 6.6)</td>
<td>1.05 (0.72 to 1.55)</td>
<td>0.789</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>1.1 (0.8 to 1.6)</td>
<td>1.5 (0.8 to 2.6)</td>
<td>1.31 (0.67 to 2.58)</td>
<td>0.432</td>
</tr>
<tr>
<td>Genital chlamydia</td>
<td>1.5 (1.1 to 1.9)</td>
<td>2.0 (0.7 to 5.3)</td>
<td>1.01 (0.41 to 2.43)</td>
<td>0.952</td>
</tr>
<tr>
<td>Syphilis</td>
<td>0.2 (0.0 to 0.6)</td>
<td>0.3 (0.0 to 1.0)</td>
<td>1.29 (0.27 to 6.05)</td>
<td>0.748</td>
</tr>
<tr>
<td>Non-specific urethritis</td>
<td>3.5 (2.8 to 4.2)</td>
<td>4.0 (2.7 to 5.9)</td>
<td>1.17 (0.74 to 1.84)</td>
<td>0.501</td>
</tr>
<tr>
<td>Genital herpes</td>
<td>1.0 (0.8 to 1.4)</td>
<td>1.1 (0.6 to 2.3)</td>
<td>1.10 (0.51 to 2.38)</td>
<td>0.804</td>
</tr>
<tr>
<td>Genital warts</td>
<td>3.6 (3.0 to 4.3)</td>
<td>3.8 (2.5 to 5.5)</td>
<td>1.04 (0.67 to 1.63)</td>
<td>0.855</td>
</tr>
<tr>
<td>Trichomonas</td>
<td>0.4 (0.2 to 0.7)</td>
<td>0.1 (0.0 to 0.5)</td>
<td>0.26 (0.04 to 1.62)</td>
<td>0.148</td>
</tr>
</tbody>
</table>

*In addition to the main Natsal 2000 sample, an additional sample (unweighted/weighted) of 406/299 men from black Caribbean, black African, Indian, and Pakistani ethnic groups were recruited in order to provide more robust estimates for these population groups.
†Unweighted/weighted bases for uncircumcised men are 4833/3795, respectively, and for circumcised men are 913/982, respectively.
‡Gonorrhoea, genital chlamydia, syphilis, non-specific urethritis, genital herpes, genital warts, and trichomonas.

∗Genital herpes and genital warts.
Cutaneous larva migrans of the penis

Cutaneous larva migrans (CLM) is a distinctive cutaneous eruption caused by the invasion and migration of larva of parasites in skin. It is also known by various other names, such as creeping eruption, sand worm, plumber’s itch, duck hunter’s itch, and epidermatitis linearis migrans. CLM occurs commonly in exposed areas, such as feet, buttocks, and hand. Isolated occurrence of CLM on the penis is very rare and, hence, rarely reported. A 24 year old unmarried male agricultural labourer presented with itchy lesions on the shaft of the penis for 5 days duration. The lesion started on the tip of the prepuce and gradually progressed upwards in a serpentine fashion. He had no lesions elsewhere on the body. He denied a history of premarital sexual contact but had visited a beach resort. He had not applied any topical medication on his penis.

On physical examination, the patient was uncircumcised. A linear serpentine lesion was seen extending from the tip of the prepuce to the shaft on the ventral aspect of the penis (fig 1). He had no other skin lesions.

His routine haemogram and serum biochemicals were within normal limits. Stool chemistry were within normal limits. Stool examination did not reveal any parasites. A clinical diagnosis of cutaneous larva migrans was made and he was put on oral albendazole 400 mg twice daily for 3 days. The lesion stopped progressing after 2 days of treatment. The lesion completely subsided by 7 days and there was no recurrence at follow up after 4 weeks.

Cutaneous larva migrans is a self limiting dermatitis commonly known as “creeping eruption,” because of its distinctive feature that the lesion creeps or migrates caused by the presence of a moving parasite in the skin. CLM has a worldwide distribution though it is common in the tropics and subtropics. The occurrence of CLM is influenced by poor sanitation and appropriate environmental conditions.

The clinical features of CLM may vary from non-specific dermatitis to typical creeping eruption. The initial lesion starts as an erythematous itchy papule. Soon, a slightly raised flesh coloured swollen lesion about 2–3 mm thick develops and forms linear, serpentine (serpiginous), or bizarre tracts. The larva migrates about 5 cm per day and forms the tortuous tracts. Sometimes, multiple vesicles may appear along the tract. Rarely, hundreds of tracts may be seen in a severely infected person.

Cutaneous larva migrans can be grouped into several types depending upon the species responsible for the lesions and their clinical appearance. They are type 1 (caused by animal hookworms), type 2 (human hookworms), type 3 (human strongyloides), type 4 (animal strongyloides), and type 6 (insect larva). CLM is usually caused by third stage larva (filariform larva) of dog and cat hookworms (Ankylostoma caninum and Ankylostoma braziliensis, respectively) and rarely by Uncinaria stenocephala, Bunostomum phlebotomum, or the human larvae of Necator americanus and Ankylostoma duodenale.

Cutaneous larva migrans is usually self limiting but the symptoms (itching) and possible complications warrant treatment. Various physical treatments, such as surgery and cryotherapy, have been tried with little success. The topical treatments that have been used include 15% thiabendazole, 2% Gammexane cream, 25% piperazine citrate, and metrifonate. Though many types of treatment have been used, albendazole is considered to be the drug of choice. Albendazole is used in the dosage of 400–800 mg/day for a period that may vary from 1–7 days. Eradication of larva causing CLM is impractical, but avoiding contact with contaminated soil of beaches can prevent it.

In our patient the localisation of CLM was unique and this could possibly be attributed to the habit of not wearing underwear when playing on the beach, thus predisposing him to develop lesions on genitalia.

References


Figure 1 A linear serpentine lesion seen extending from the tip of the prepuce on to the shaft.
STI case management at a South African teaching hospital

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