Lessons from the syphilis outbreak in homosexual men in east London

M Hourihan, H Wheeler, R Houghton, B T Goh

METHODS

A retrospective study using data from KC60 returns, the Health Protection Agency (HPA) enhanced surveillance forms and case notes.

RESULTS

A total of 103 cases were identified, 40 with primary (PS), 40 with secondary (SS) and 23 with early latent syphilis. The median age was 36 years (range 17–56) and 93% were white, 5% Asian and 2% Afro-Caribbean.

Clinical presentation

The lesions of PS were located on the penis (27), anal margin (eight), and mouth (five). Chancres were painful in 14 (35%) cases, six were initially treated as for ano-genital herpes; one patient was both HSV culture and DGM positive. Men with SS presented with rash alone (25), rash and mucocutaneous ulcers (nine), rash and generalised lymph nodes (four), rash, lymph nodes, and ulcers (two). In 10 (25%) cases of SS, the rash was itchy in five cases, being the predominant symptom in these men. HIV positive patients presented as PS (15%), SS (59%), and early latent syphilis (26%).

Concurrent STIs

In all, 34% of the cohort were known to be HIV positive, 34% tested negative, while the others declined testing. Of 99 accepting a sexual health screen, in 43 co-existing STIs were diagnosed, three patients having more than one STI. Of eight with rectal gonorrhoea, six were HIV positive (table 1).

Diagnostics

Of 40 with PS, 27 had dark ground microscopy (DGM) performed (no intra-oral lesions) of which 22 (81%) were positive. Fifteen of 40 (38%) cases had negative initial syphilis serology (treponemal EIA- murex ICEsyphilis), 14 of which were sent to the HPA Reference Laboratory, Bristol and were all found to be EIA IgM positive. All 40 cases of SS had positive initial EIA. DGM was performed in 17 cases and this was positive in 15 (88%). The main reasons why DGM was not performed were equipment failure, trained staff unavailability, or ulcers were too painful and were initially diagnosed as ano-genital herpes.

Route of acquisition and partner notification

Fifty-four patients (52%) stated that the only risk factor was unprotected oral intercourse (UPOI). Of the 35 HIV positive patients, 57% were known to have a detectable plasma viral load. Nineteen of 35 patients (54%) reported unprotected anal intercourse (UPIA). Most men (86%) reported likely acquisition in the United Kingdom. Of a total of 1279 contacts cited, only 122 (10%) were known and contactable, with 43 (4%) being successfully traced and screened. Social networks identified by the 103 index cases were bars (54%),

Abbreviations:

DGM, dark ground microscopy; GUD, genital ulcerative disease; HPA, Health Protection Agency; PS, primary syphilis; pVL, plasma HIV-RNA viral load; SS secondary syphilis; STI, sexually transmitted infections; UPAI, unprotected anal intercourse; UPOI, unprotected oral intercourse.
sauna (9%), internet (9%), public sex venues (5%), and escorts (2%).

**Treatment**

In all, 51 (49.5%) received parenteral treatment and 51 oral doxycycline 100 mg twice daily for 2 weeks or 200 mg twice daily for 4 weeks. Forty five patients received procaine penicillin intramuscularly 600 mg once daily for 10 days or 1.8 g once daily with oral probenecid 500 mg four times daily for 17 days; six had benzathine penicillin intramuscularly 2.4 megaunits weekly for two injections. One received oral amoxicillin 2 g/probenecid 500 mg four times daily for 28 days. In 14 known HIV patients, regimens were as for syphilis.11

**DISCUSSION**

The lessons from this case study are distinctive and provide a greater understanding of this current outbreak. “Classic” presentations such as painless chancres and non-itchy rash should not be perpetuated. Genital ulcers were painful in 35%, imitating ano-genital herpes. The rash of SS may be itchy and this was a feature in 13% in this study of predominantly white men. In another study, 10% had an itchy rash but 40% of patients were black.10 This may cause diagnostic confusion with other aetiologies such as drug rash.

Any homosexual man with genital ulcerative disease (GUD) should have DGM performed. This has been shown to be highly sensitive in trained hands, allowing early intervention.12 The lack of sensitivity of the screening syphilis serology in PS emphasises the need for DGM and serosurveillance for up to 3 months in undiagnosed GUD.13,14 Almost equal numbers opt for parenteral or oral treatment; the popularity of the latter is based on convenience; encouragingly, all who opted for daily procaine penicillin injections completed their course. The long term efficacy of oral treatment is unknown and requires clinical and serological follow up, particularly in HIV cases, as clinical relapse is a real possibility in this group.

Fifty one per cent of patients stated oral sex as the only risk factor. While this is perceived as low risk for acquisition of HIV, it is considered high risk for the transmission of syphilis as oral lesions are highly infectious. The high rates of concurrent STIs found, including rectal gonorrhoea, suggest ongoing UPAI. Worryingly, there was a high rate of UPAI reported among HIV positive cases; 57% of the co-infected patients had detectable plasma HIV-RNA viral load (pVL). The presence of syphilitic lesions could result in increased transmission of HIV as inflammation, secondary to infection, increases local HIV RNA, and raised pVL correlates with higher semen HIV-RNA.15 Not infrequently, HIV infected patients present with more severe GUD, neurosyphilis, and other complications.7 This, together with the high prevalence of STIs in HIV patients, supports the recommendation that HIV patients should receive comprehensive sexual health care integrated with their specialist care.16 Syphilis screening at 3 monthly intervals, if HIV positive, has been shown to yield significant numbers of asymptomatic cases.17

Non-effective partner notification is a concern, with reported incidence of early syphilis in contacts of 26%18 and 21%.19 Interventions to case find and impact on the present outbreak are difficult as the majority of partners were casual and untraceable, as they were met through bars, saunas, internet, and public sex venues. Some identifiable contacts may have accessed other clinics. The Terence Higgins Trust has a campaign to promote awareness of the syphilis outbreak in gay venues20 but its efficacy is unclear. The value of case finding using treponemal serology at homosexual venues is also uncertain.21 The development of an oral test or real time desktop rapid blood tests, providing immediate diagnosis, are more user friendly and may prove more useful than current serology for case finding.22,23 There is a suggestion that sexual health promotion through the internet may be feasible.24 Other strategies will need to be developed to control the present outbreak of syphilis in the United Kingdom.

A limitation of this study is that it is retrospective. A prospective qualitative study looking at disease presentation and assessing partner non-notification will provide further understanding of issues and enable appropriate and gender sensitive interventions.

**ACKNOWLEDGEMENTS**

The authors would like to thank the administrative, nursing, and health advising staff of Barts Sexual Health Centre and the Ambrose King Centre.

**CONTRIBUTORS**

MH and HW participated in the protocol development, collected the data and are the principal authors; BTG initiated the study, developed the protocol, and critically revised the paper.

**Authors’ affiliations**

M Hourihan, H Wheeler, Houghton, B T Goh, Ambrose King Centre, Barts and the London NHS Trust, Whitechapel, London E1 1BB, UK

Funding: Nil.

Conflict of interest: None.

Correspondence to: M Hourihan, Ambrose King Centre, Barts and the London NHS Trust, Whitechapel, London E1 1BB, UK; martin.hourihan@bartsandthelondon.nhs.uk

Accepted for publication 6 August 2004

**REFERENCES**


Lessons from the syphilis outbreak in homosexual men
Lessons from the syphilis outbreak in homosexual men in east London

M Hourihan, H Wheeler, R Houghton and B T Goh

Sex Transm Infect 2004 80: 509-511
doi: 10.1136/sti.2004.011023

Updated information and services can be found at:
http://sti.bmj.com/content/80/6/509

These include:

References
This article cites 18 articles, 7 of which you can access for free at:
http://sti.bmj.com/content/80/6/509#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections

- Syphilis (793)
- Screening (epidemiology) (984)
- Screening (public health) (984)
- Clinical diagnostic tests (279)
- Confidentiality (230)
- Drugs: infectious diseases (3182)
- Health education (960)
- HIV / AIDS (2514)
- HIV infections (2514)
- HIV/AIDS (2514)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/