

Sexually transmitted diseases in homosexual males in Seville, Spain

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Abstract

Background and methods—The absence of any official statistics on the prevalence of STD in homosexual men in Spain induced us to carry out a prospective study of new homosexual patients who consulted the STD Clinic of the School of Medicine in Seville, between January 1988 and December 1989. The aim of the study was to determine the prevalence of symptomatic and asymptomatic infections in this group of patients.

Results—1805 patients were seen during the study period; 318 patients were homosexual of whom 309 agreed to participate in the study. Of the 309 homosexual men, 108 (35%) had symptoms and the remaining 201 (65%) were asymptomatic. In the symptomatic group the diagnoses were: syphilis 28 (25.9%); urethritis 40 (37%) (of these 40, 11 had *Neisseria gonorrhoeae*, five had *Chlamydia trachomatis*, five had *Ureaplasma urealyticum*, one had *Herpes simplex* virus and in 18 no pathogen was detected); genital herpes seven (6.4%). Eleven (10%) had concomitant infections. The following infections were found in the asymptomatic group: syphilis 23 (11.4%), *N gonorrhoeae* six (3%), *C trachomatis* two (1%), *Herpes simplex* virus one (0.5%). Antibodies against HIV were detected in 30 (9.6%) of the total group.

Conclusions—Sexually transmitted diseases are common amongst homosexual men in Seville and many of these are asymptomatic.

Introduction

Over the past decade there has been a growing awareness that homosexual men with multiple, anonymous sex partners are at an increased risk for acquiring STDs, which may be symptomatic or asymptomatic.^{1,2} The spectrum of STDs observed among homosexual men differs from the pattern among heterosexuals.¹

Because of the lack of reliable statistics in Spain,

except for gonorrhoea and syphilis, we conducted a prospective study in order to determine the prevalence of STDs in two groups of homosexual males attending the STDs Clinic of the School of Medicine in Seville, a city with a population of 651,084.

The purpose of this study was to determine the prevalence of STDs, which in some cases favour the transmission of HIV, and in order to establish possible measures and the health priorities to control them.

Methods

Seville is a city in southwestern Spain, with 651,084 inhabitants, 346,271 of them are attended by the University Hospital (which includes the STD Clinic). One thousand eight hundred and five patients (965 heterosexual men, 318 homosexual men and 522 women) consulted over a two year period (from January 1988 to December 1989). Of the 318 homosexual men who consulted, all were offered the opportunity of participating in the study, and 309 accepted. Only the first visits were evaluated in the present study, omitting reinfections or detection of new STDs during follow-up. We used a standard clinical history and physical examination form to evaluate each patient. The form included questions regarding age, race, sexual preference, sexual behaviour and the reason for attending the Clinic. All the examinations were performed by experienced clinicians, and all laboratory work was performed on site in the Clinic.

Diagnostic criteria. The Venereal Diseases Research Laboratory (VDRL) test was carried out as screening procedure for syphilis in all patients, and the fluorescence treponemal antibody absorption test (FTA-abs) used to confirm the results.³ All patients were screened for HIV antibodies by enzyme immunoassay (Abbot), and all positive sera were confirmed by Western Blot analysis. Urethral, rectal and pharyngeal samples were collected from all the patients to isolate *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, genital *Mycoplasmas* and *Herpes simplex* virus by standard culture techniques previously reported.⁴ A Gram stain was also performed on all urethral samples. Diagnosis of urethritis was established by the presence of a mean of more than 4 polymorphonuclear leucocytes in five × 1000 oil-

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Table 1 Demographic characteristics and sexual behaviour of 309 homosexual males

Age (years)	27.9, SD 7.4
Years of homosexuality	10.2, SD 6.6
Age at first homosexual intercourse	17.9, SD 4.6
Number of sexual partners in past month	3.5, SD 6.7
Number of sexual partners in past 4 months	11.8, SD 14.3
Sexual practices	%
Fellatio active	79.5
Fellatio passive	84.6
Anilingus active	43.6
Anilingus passive	46.2
Anal intercourse active	76.9
Anal intercourse passive	64.1

immersion fields of a Gram stained smear of urethral exudate. Gonococcal urethritis was diagnosed if *N gonorrhoeae* was detected, otherwise a diagnosis of non-gonococcal urethritis (NGU) was made. Proctitis was defined as the existence of anorectal signs and the presence of polymorphs in the Gram stain of rectal exudate. Condylomata acuminata, scabies and pediculosis pubis were diagnosed on a clinical basis. *Statistical methods.* Chi square tests were carried out with Yates' correction.

Results

The reason given by the patients for attending the clinic were the following: presence of symptoms 108 (35%) and for a check up 201 (65%). The demographic characteristics and sexual behaviour of these patients is summarised in table 1.

The overall rates of STDs among 309 homosexual males were as follows: syphilis 51 (17%), 17 primary syphilis, 8 secondary syphilis and 26 latent syphilis in early stage, gonococcal infection 19 (6%), *C trachomatis* infection 10 (3%), *U urealyticum* infection 112 (36.2%) and non-gonococcal urethritis of unknown aetiology 18 (5.8%). Condylomata acuminata 18

Table 3 Asymptomatic infections in 309 homosexual males

	Urethra	Rectum	Pharynx	Total
<i>N gonorrhoeae</i>	—	2	5	7
<i>C trachomatis</i>	3	2	—	5
<i>U urealyticum</i>	43	41	23	107
<i>Herpes simplex virus</i>	—	1	3	4
Total	46 (14.9%)	46 (14.9%)	31 (10%)	123 (39.8%)

(5.8%), *Herpes simplex virus* infection 13 (4%) and 19 (5.7%) patients were diagnosed as suffering from other conditions (table 2). Syphilis (17%), was significantly more frequent in the homosexual patients when compared with the heterosexual male (4.6%) and female (4.4%) patients. NGU of unknown aetiology, condylomata acuminata and *Herpes simplex virus* infections were similar in the three groups while gonococcal infection (14.7%) was significantly more frequent in the heterosexual male patients when compared with the homosexual male patients. Homosexual men were more likely to present without symptoms than the heterosexual male and female patients ($p < 0.001$). Antibodies against Human Immunodeficiency Virus were detected in 30 (9.6%) of the homosexual men. The different infections comparing symptomatic and asymptomatic patients is shown in table 2.

Syphilis was diagnosed in 28 (23%) patients (17 with primary, eight with secondary and three with latent infections). Seven patients with proctitis were found (one *N gonorrhoeae*, one *H simplex virus* and five unknown aetiology). In addition, 11 patients were found to be suffering from an asymptomatic concomitant infection. Latent syphilis was diagnosed in three, *C trachomatis* in three, *Neisseria gonorrhoeae* in one, and *Herpes simplex virus* in three). One patient

Table 2 STDs comparing homosexual males with heterosexual males and females

Diagnosis	Homosexual males			Heterosexual patients		Sig
	Symptomatic patients (n = 108) (%)	Asymptomatic patients (n = 201) (%)	Total patients (n = 309) (%)	Male (n = 919) (%)	Female (n = 568) (%)	
Syphilis	28 (25.9)	23 (11.4)	51 (17)	42 (4.6)	25 (4.4)	0.001*†
Gonococcal infection	13 (12.0)	6 (3)	19 (6)	135 (14.7)	43 (7.5)	0.001*†
<i>C trachomatis</i> infection	8 (7.4)	2 (1)	10 (3)	69 (7.5)	39 (6.9)	NS*†
<i>U urealyticum</i> infection	48 (44.0)	64 (31.3)	112 (36.2)	—	—	
NGU of unknown aetiology	18 (16.7)	—	18 (5.8)	78 (8.4)	—	NS*
Condylomata acuminata	14 (12.9)	4 (2)	18 (5.8)	55 (5.9)	33 (5.8)	NS*†
<i>Herpes simplex virus</i> infection	12 (11.1)	1 (0.5)	13 (4)	31 (3.4)	26 (4.5)	NS*†
Proctitis	7 (6.4)	—	7 (2.2)	—	—	
Other conditions	19 (16.6)	—	19 (5.7)	201 (22)	206 (36)	ND
Asymptomatic patients	—	—	201 (65)	308 (33.5)	196 (34.5)	0.001*†

*Heterosexual males vs homosexual males.

†Heterosexual females vs homosexual males.

ND—Not Done.

was found to have perianal warts of which he was not previously aware.

One hundred and twenty-three asymptomatic carriers of genital pathogens were detected in 309 homosexual males studied (table 3).

Discussion

The present report is the result of a prospective study designed to determine the rates of different STDs among 309 homosexual males. This is the first study of its kind carried out in Spain. The prevalence of infections among Spanish homosexual patients is similar, though somewhat lower, than that reported previously in America and other parts of Europe.^{1,2,5,6} It is interesting to point out here the low (1:2) ratio of gonorrhoea to syphilis found among the homosexual males from Seville as compared with the 5:1 ratio of British homosexual males.⁷ In North America and Northern European countries, both diseases are declining,⁸⁻¹⁸ probably owing to the changes in sexual behaviour among homosexual men through health education programmes induced by the rapid spread of infection with HIV in this high risk group.

The incidence of gonorrhoea in Spain has been declining in recent years. The figures per 100,000 inhabitants in 1985, 1988 and 1989 were 79.41, 50.13 and 44.79 respectively. Similarly, the figures for syphilis were 10.11, 5.87 and 4.42. However, the figures for Andalucia (where Seville is situated) show no such trend. The comparable figures for gonorrhoea being 57.94, 57.71 and 61.84, and for syphilis 5.34, 6.37 and 6.03.¹⁹

Urethritis was the most frequent syndrome diagnosed in patients with symptoms, and *N gonorrhoeae* alone or with other pathogens was isolated in 28% of them. Several studies have confirmed the relatively low rate of NGU in homosexual males as compared with heterosexual males^{20,21} of whom about 20% with NGU are not infected with either *Chlamydia* or *Ureaplasma*; in common with other investigators, we found a low rate of *C trachomatis* or *U urealyticum* urethritis, and consequently, a high rate of NGU of unknown aetiology.²² The similar prevalence of *U urealyticum* infection in symptomatic and asymptomatic patients shows the scant clinical relevance of this microorganism, and it is rather a marker of promiscuity, which is very high in the homosexual population.

Homosexual men practising oral or anal-receptive intercourse, may have oral or intra-anal chancres that are not readily visible,²³ and therefore they are more liable to develop secondary syphilis.²⁴ Thirty two per cent of the total number of patients in the symptomatic group diagnosed as suffering from syphilis did, in fact, have secondary syphilis.

The antibody rate against HIV is low in our study, but as happens in other countries, there are regional differences in that rate. It is also well documented that

the major population group at risk for development of AIDS in Spain and Italy are the parenteral drug addicts.²⁸

We found that 15% of STD diagnosed were subclinical, and almost half of the syphilis diagnosed fell into this category. We found rates of pharyngeal and rectal carriers of *N gonorrhoeae* and rectal carriers of *C trachomatis* similar to those previously reported studies. Unlike authors of previous studies, we found no pharyngeal carriers of *C trachomatis*.^{29,30}

The high rates of gonococcal infection and syphilis in this group of the population make it necessary for both diseases to be screened for in all patients especially because a high percentage of the syphilis is asymptomatic. This should contribute to diminishing the transmission of HIV in this group.

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