

Sexually Transmitted Diseases and Sexual Behaviour in Men Attending an Outpatients' Clinic for Gay Men in Gothenburg, Sweden

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The prevalence of sexually transmitted diseases (STDs) diagnosed in men attending an outpatients' clinic for gay men from 1983 to 1997 and the results from a questionnaire survey concerning sexual behaviour conducted in 1994–96 are reported. The prevalence of gonorrhoea and chlamydia has decreased during the period, although in 1997 there was a micro-epidemic of gonorrhoea in gay men in Gothenburg. The results indicate that the reservoir of syphilis and hepatitis B in the gay population was eradicated during the early 1980s. Of altogether 1808 HIV tests performed, 3.0% ($n=55$) were positive. In the questionnaire, the majority claimed they had sufficient knowledge on how HIV is transmitted, while 11.3% stated that they lacked that knowledge. Half of the patients stated that they had a steady sexual partner. Starting a new relationship was the most common reason (69%) for HIV screening. The use of condoms in anal and oral sex was 88% and 31%, respectively. Of those practising anal sex, 4% stated that they never used a condom. The prevalence of STDs has decreased in this period of time and safer sex is fairly well accepted, but the results also tell us that there is still a need for dedicated clinics like ours. **Key words:** STD; sexual behaviour; gay men.

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In the 1970s there was an increase in the number of gay men diagnosed with sexually transmitted diseases (STDs), especially in the major cities. This was supported by studies from the early 1980s from both Sweden and other countries, e.g. Holland and the USA (1–4). The reasons for this were a more open gay culture, almost a decade after the heterosexual 'sexual revolution'. This culture meant saunas and a large number of casual sexual partners. Contact tracing was not fruitful since many of the partners were anonymous.

In 1981 the first case of AIDS was diagnosed in Sweden, and from the end of 1984 a serological test for HIV infection was available. In Gothenburg, the second largest city in Sweden, a dedicated outpatients' clinic for gay men was created within the STD clinic of Sahlgrenska University Hospital.

In this study we present the prevalence of STDs diagnosed in gay men attending our Gay Health Clinic (GHC) from 1983 to 1997 and report the results from a questionnaire survey concerning sexual behaviour conducted in 1994–96.

MATERIAL AND METHODS

The GHC is an outpatients' clinic open 1 evening a week having a doctor and 2 gay nurses on duty each time. The primary aim of the work in the clinic is to prevent the spread of HIV among men who have sex with men. The consultation includes discussion and information about STD/HIV, condom use and safer sex. In this meeting, we also try to identify and help men who experience problems with their sexual orientation. When needed, a psychologist is contacted for further discussions.

All patients are offered screening for STDs. Blood tests are taken for HIV antibodies, hepatitis B and syphilis (VDRL and/or TPHA). Specimens for gonococcal culture are taken from the urethra, rectum and/or throat and for *Chlamydia trachomatis* (*C. trachomatis*) from the urethra and/or rectum. Stool specimens preserved in formalin are examined for the pathogenic parasites *Entamoeba histolytica* and *Giardia lamblia*. The tests methods used are those used as routine in the laboratory (1, 2). For *C. trachomatis* ELISA, the immunofluorescence tests were used until 1995, when the PCR technique was introduced.

The number of patients, screenings and the results are compiled every year, although STD and HIV data for 1989 and STD data for 1994 are missing.

During the period 1994–96 a questionnaire was handed out to the patients including questions about earlier STDs and HIV screening, reason for attending, number of sexual partners, type of sexual practice, use of condoms and the patient's experience of the clinic and the staff. The questionnaire was filled in anonymously and the answers could not be related to the results of the screening for STDs or HIV. The questionnaire was not distributed regularly during the period, and thus the number of dropouts could not be estimated.

RESULTS

The number of patients attending the clinic has been approximately 150 per year (Table I). The number was highest in 1984–86, when screening for HIV antibodies was introduced. About 60% had attended the GHC more than once during the 15-year period. Most attendees are in the age group 30–35 years old.

HIV-screening

The numbers of tests for HIV and the number of patients diagnosed with HIV are shown in Fig. 1. Altogether 1808 HIV tests were taken and 55 (3.0%) were positive.

Gonorrhoea

Only a few cases of gonorrhoea were diagnosed during the 1980s, and the test frequency declined during the following years. In 1997, 6 cases of gonorrhoea were diagnosed. At least 3 of these had been infected in Gothenburg (Table I).

Table I. Prevalence of STDs in men attending the Gay Health Clinic in Gothenburg, Sweden from 1983 to 1997

Years	No. patients	Gonorrhoea		Chlamydia		Intestinal parasites		Anti HbsAg	
		No. tested	No. pos.	No. tested	No pos.	No. tested	No. pos.	No. tested	No. pos.
1983-87	986	885 (90%)	11 (1.2%)	911 (92%)	38 (4.2%)	851 (86%)	73 (9%)	845 (86%)	304 (36%)
1988-92	500	261 (52%)	2 (0.8%)	264 (53%)	7 (2.6%)	211 (42%)	11 (5%)	207 (41%)	64 (31%)
1993-97	724	160 (22%)	6 (4%)	173 (29%)	1 (0.6%)	54 (8%)	5 (9%)	90 (12%)	4 (4%)

All data for 1989 and 1994 are missing.

Chlamydia trachomatis

As shown in Table I, the prevalence of chlamydia has decreased, as has the number of tests performed. Of altogether 46 positive tests for chlamydia, 22 were from the urethra and 24 from the rectum.

Intestinal parasites

Most men with a detected *Entamoeba histolytica* and *Giardia lamblia* infection had no symptoms. During the last 5-year period very few patients were tested and the rather high frequency of positive tests may reflect a selection of patients with mild gastrointestinal dysfunction for testing (Table I).

Hepatitis B

Hepatitis B markers were diagnosed in 4% of those tested after 1992. Four cases were found to be HbsAg positive before 1986 and 1 case in 1991 (Table I).

Syphilis

In the period 1983-87, as many as 84% of the attendees were screened for syphilis and the prevalence of syphilis antibodies was 8.8%. In all but 3 cases the positive serology reflected an earlier diagnosed and treated infection. During 1988-92 only 56% were tested and the prevalence of positive serology was 11.7%, compared with 2% in 1993-97, when only 25% were

tested. After 1987 only 1 case of untreated latent syphilis has been diagnosed.

Questionnaires

In the period 1994-96, 314 questionnaires were completed. The median age was 32 years, with a range of 16-73 years. The respondents reported an earlier history of STDs as follows: gonorrhoea 18.2%, condyloma accuminata 16% and chlamydia trachomatis 11.7%.

One-third of the men were screened for HIV for the first time, but most had been tested 3-4 times previously. The most common reason for screening was starting a new relationship (69%), followed by information about HIV/AIDS in the media (17%), information from non-governmental organizations (8%) or that somebody the man knew had recently been informed that he had HIV (6%). A majority (85%) thought they had sufficient knowledge about how one can contract HIV, but 11% thought they lacked knowledge.

Seven percent stated that they had had sex with someone known to be infected with HIV, half of whom claimed not to have practised safe sex.

Forty-seven percent stated that they had a steady sexual partner, who in 3 cases out of 4 had been tested for HIV. Approximately every fourth respondent had had 6 or more partners during the last 6 months. In casual sexual contacts, 20% always or mostly practised anal sex and 56% oral sex. Mutual masturbation was the most common of the sexual techniques (76%). Eighty-eight percent reported that they always or mostly used a condom when practising anal sex, while 4% never used condoms in anal sex. In oral sex less than one-third used condoms. Less than half (48%) of the respondents asked their sexual partners' about their HIV status.

Failure when using condoms the last time they had sex was reported by 4-5%. One percent claimed they often had problems with condoms that ruptured. About 40% stated that drinking alcohol had made them not use a condom.

For almost 80% of the attendees, the sexual orientation of the personnel at the GHC did not matter, while for 6.5% it was important that the GHC had gay staff. If the GHC had not been available, 65% would have visited 1 of the other 2 outpatients' clinics for STD

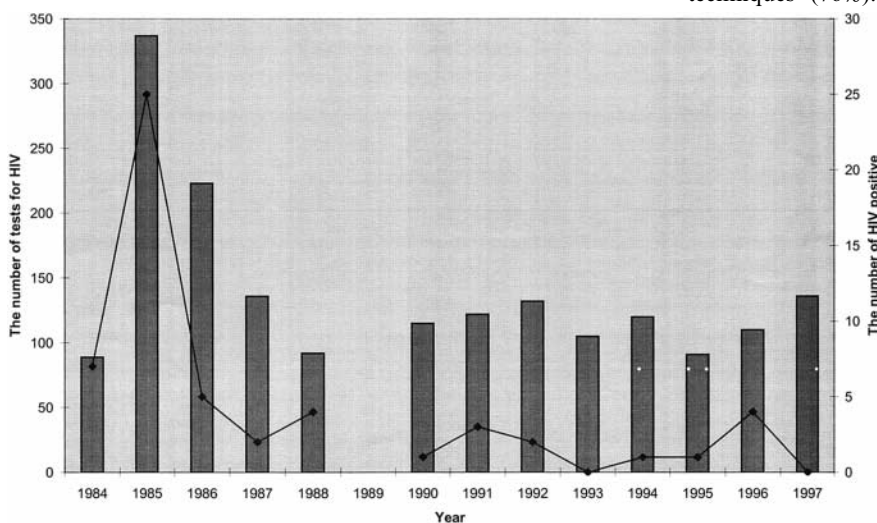


Fig. 1. Results of HIV testing in the Gay Health Clinic, Gothenburg 1984-97. The total number of tests is 1808. Of these, 55 (3.0%) were positive. Shaded bars=number tested, ◆ = HIV+.

screening, but 2% would have chosen not to have a screening.

DISCUSSION

During this 15-year period, 55 cases of HIV infection have been diagnosed at the GHC, which corresponds to 3% of the tests for HIV taken. In Gothenburg during the same period, 185 cases of HIV in homosexual men were reported. In comparison, the testing of patients attending STD clinics in Sweden from 1986 to 1994 yielded 0.2% (5). In studies comprising homosexual men in Gothenburg before 1983, a prevalence of gonorrhoea of 7–11% and of chlamydia of 2–5% was reported (1, 2). Screening for gonorrhoea in the GHC has decreased every year. During the first period, 1983–87, most men (88%) were tested for gonorrhoea and of 11 cases, 6 were diagnosed in 1984, 4 in 1985 and one in 1986. In 1997 there was a sudden increase, with 6 cases of gonorrhoea diagnosed, at least half of them having contracted the infection in Gothenburg. This increase is in line with reports from both Stockholm (6) and London (7), where a rise in the incidence of gonorrhoea in gay men was reported. In Sweden, gonorrhoea has decreased dramatically from about 40,000 cases reported in 1970 to 200–400 cases per year during the last years. The fall in the number of reported cases of gonorrhoea was 61% from 1970 to 1980, and 96% from 1980 to 1990. Many factors have been proposed to explain the continuous declining incidence of gonorrhoea in Sweden (8). During the 1980s and 1990s an altered sexual behaviour especially among gay men has been explained by the HIV campaigns. In Gothenburg there was an increase in the reported number of cases of gonorrhoea from 15 in 1996 to 37 in 1997. Of these, 30 were men and 9 were homosexuals. Six of 9 infections in homosexual men were contracted in Gothenburg, reflecting a micro-epidemic of gonorrhoea during a limited period of time. Screening for chlamydia also decreased after 1987, but the frequency of positive tests did not decline significantly until after 1992. In Sweden, chlamydia infections peaked in 1988 with 38,000 cases reported and since 1993 about 14,000 cases a year have been registered.

Before 1983 a prevalence of undiagnosed syphilis of 5% was reported in homosexual men in Gothenburg (1, 2). In fact, one reason for starting screening programmes in the gay population was the high prevalence of syphilis and the shortcomings (in this context) of contact tracing. The reservoir of syphilis among gay men in Gothenburg was eradicated during the beginning of the 1980s. It is interesting to note the low prevalence of antibodies for syphilis from 1993 to 1997, reflecting a cohort of men not exposed to syphilis so much as men who were sexually active during the 1970s. The same pattern can be seen for hepatitis B.

Concerning intestinal parasites, the prevalence has probably decreased, but a clear picture could not be obtained from our data since so few men were screened during the 1990s. The prevalence of 9% in 1993–97 might reflect selection of patients having been abroad and/or having mild gastrointestinal symptoms for testing.

A comparison of the incidences of STDs at the GHC in 1986 and studies done close in time from Gothenburg (1, 2) and Finland (9) reveals that the figures from the GHC are considerably lower for both gonorrhoea and HIV, but similar for syphilis, hepatitis B and chlamydia.

Approximately half of the patients stated that they had a steady sexual partner, this is a similar result to that in

Håkansson's study (10). Starting a new relationship was the most common reason (69%) for HIV screening. Generally, the couple had already had several sexual contacts, contacts that in many cases also included unsafe sex. This may indicate a risk of infection since 25% of the steady sexual partners had not been screened for HIV. Studies reveal that unprotected anal intercourse is most common with a steady partner (11, 12) as a symbol of trust and that the relationship is "for real": the so-called "risk factor love" (12). In addition, "open relationships", where sexual contacts outside the steady relationship are accepted, are not uncommon (11).

The reported 5% failure level when using condoms is a more positive result compared with other studies (10, 13).

The use of condoms in anal and oral sex, 88% and 31% respectively, is higher than in Valle's study (9), where, at the end of her study, 33% were reporting the use of condoms at least sometimes in anal sex. A Danish study revealed that 5–6% practised "unsafe sex" and were not prepared to alter their behaviour (14). In this questionnaire 4% of those practising anal sex stated that they never used condoms.

During the reported period of time, a dramatic decrease in STDs occurred during the first 5-year period, from 1983 to 1987. In the beginning of the 1980s HIV/AIDS appeared in Sweden and the message to homosexual men about safer sex was intense. A majority effectively adopted the message. Several reports documented a change in sexual behaviour (10). The increase of gonorrhoea is worrying and indicates that information must be continuous. The data from our questionnaire show that the gay population studied is well informed about safer sex and reports frequent use of condoms. After almost 2 decades, the GHC is a well-established resource for men who have sex with men in the Western part of Sweden

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