

Sexually transmitted diseases among foreigners in Italy

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(Accepted 20 December 1996)

SUMMARY

A sentinel surveillance system for the control of sexually transmitted diseases (STD) among foreigners was developed in Italy in 1991. From January 1991 to June 1995, 4030 foreigners with a new STD episode were reported. More than one-third of them were North-Africans. The most frequent STDs were non-specific urethritis and genital warts among men, and non-specific vaginitis and latent syphilis among women. The overall HIV prevalence was 5%, with large differences in rates in people from different continents. Very high HIV-positivity rates were observed among homosexuals and homosexual IDUs from Central–South America, with 39·1% and 77·8% seropositive individuals respectively.

These data stress the need for increased knowledge of both the spread of and risk factors for STDs among immigrants. Particular attention should be paid to counselling procedures focused on the prevention of risk behaviours for acquiring STDs and HIV infection.

INTRODUCTION

In recent years, the number of immigrants reported to be residing legally in Italy has increased greatly. At the end of 1994, there were 922 706 legal immigrants (source: Ministry of Interior), representing 1·6% of the total Italian population, an 18% increase compared to 1990. The majority of legal immigrants came from other European countries (39·8%) and from Africa (28·1%) [1]. The number of immigrants who are not residing in this country legally is unknown but has been estimated to range between 400 000 and 500 000 individuals [2, 3].

No routine health screening is performed upon entry into Italy, and until very recently the National Health Service extended free health care only to legal

immigrants. Though illegal immigrants have access to the many private health facilities, most of them cannot afford the high costs. Thus, the vast majority of these individuals have been denied health care, as well as legal protection and social assistance. Furthermore, no data are available on the frequency of illnesses acquired in Italy, yet infectious and parasitic diseases are frequently seen in immigrants [4, 5], suggesting that their sanitary and housing conditions are generally poor.

The Italian National STD Surveillance System was established in September 1990 [6], and collects data on incident cases of certain STDs, reported by 47 sentinel STD clinics located throughout the country. During the first 4 months of surveillance (September–December 1990) 2091 patients were reported; of these 189 (9·0%) were foreigners, mainly Africans. This relatively high percentage of foreigners among STD patients attending Italian STD clinics prompted us to examine the demographic and clinical information reported for these individuals. Foreigners with STDs

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Table 1. *Diseases included in the surveillance system and diagnostic criteria*

Diseases	Minimal diagnostic criteria
Gonococcal urethritis	Clinical criteria: presence of urethral discharge. and/or only Microbiological criteria: intracellular Gram-negative diplococci in Gram stain of male urethral secretions or isolation of <i>N. gonorrhoeae</i> in culture.
Chlamydial urethritis	Microbiological criteria: isolation of <i>C. trachomatis</i> by culture or identification by antigen detection methods (ELISA or direct immunofluorescence).
Non-specific urethritis	Clinical criteria: presence of urethral discharge. and/or only Microbiological criteria: presence of any infective agent other than <i>N. gonorrhoeae</i> and <i>C. trachomatis</i> .
Gonococcal cervicitis	Clinical criteria: presence of cervical or vestibular discharge. and/or only Microbiological criteria: isolation of <i>N. gonorrhoeae</i> in culture.
Chlamydial cervicitis	Microbiological criteria: isolation of <i>C. trachomatis</i> by culture or identification by antigen detection methods (ELISA or direct immunofluorescence).
Trichomonal vaginitis	Microbiological criteria: presence of typical moving bodies in vaginal smears observed through microscopic examination.
Non-specific vaginitis	Clinical criteria: presence of vaginal discharge. and/or only Microbiological criteria: presence of any infective agent other than <i>N. gonorrhoeae</i> , <i>C. trachomatis</i> , and <i>Trichomonas vaginalis</i> .
Genital warts	Clinical criteria: presence of visible exophytic growths on the internal or external genitalia, perineum or perianal region, compatible with the clinical picture of genital warts. <i>Note</i> : only the first diagnosis of genital warts in patients with no previous diagnoses must be reported.
Pelvic inflammatory disease	Clinical case definition: a clinical syndrome resulting from the ascending spread of micro-organisms from the vagina and endocervix to the endometrium, fallopian tubes, and/or contiguous structures. The following clinical criteria must be present: (1) abdominal direct tenderness; and (2) tenderness with motion of the cervix; and (3) adnexal tenderness. In addition to all of the above criteria, at least one of the following findings must also be present: (1) patient meets the surveillance case definition of <i>C. trachomatis</i> infection or gonorrhoea; or (2) temperature > 38 °C; or (3) leucocytosis > 10000 WBC/mm ³ , or (4) purulent material in the peritoneal cavity obtained by culdocentesis or laparoscopy (5) pelvic abscess of inflammatory complex on bimanual exam or by sonography (6) patient is a sexual contact of a known case of gonorrhoea, chlamydia, or NGU (7) presence of specific anti- <i>C. trachomatis</i> IgA and IgM.
Pediculosis	Clinical criteria: presence of <i>Phthirus pubis</i> or nits in the pubic area.
Chancroid	Clinical criteria: presence of single or multiple genital ulcers and inguinal adenopathy compatible with chancroid. and Microbiological criteria: cultural isolation of <i>Haemophilus ducreyi</i> .
Lymphogranuloma venereum	Clinical criteria: presence of genital lesions and regional adenopathy compatible with lymphogranuloma venereum and Microbiological criteria: isolation of <i>Chlamydia trachomatis</i> from clinical specimens (serotype L1, L2, or L3) with cell culture.
Granuloma inguinale	Clinical criteria: presence of lesions compatible with granuloma inguinale and Microbiological criteria: presence of intracytoplasmatic organisms (Donovan bodies) in Giemsa or Wright-stained smears.
Genital herpes	Clinical or laboratory criteria: presence of herpes lesions in the anogenital region. Uncertain cases must be confirmed with the demonstration of multinucleated giant cells on a Tzanck smear of scrapings from a lesion, or with the demonstration of virus by antigen detection technique in clinical specimens. <i>Note</i> : only the first diagnosis of genital herpes in patients with no previous diagnoses must be reported.
Syphilis	
(1) Primary	Clinical criteria: one or more signs compatible with primary syphilis and Microbiological criteria: identification of <i>Treponema pallidum</i> by darkfield examination.
(2) Secondary	Clinical criteria: one or more signs of secondary syphilis. and Microbiological criteria: TPHA positive test (titre > 80).
Latent syphilis	Serological criteria: VDRL, TPHA, and FTA-ABS positive tests.
Molluscum contagiosum	Clinical criteria: presence of lesions compatible with molluscum contagiosum infection.

were found to differ from Italian STD patients in two major ways. First, among the foreigners, the most commonly diagnosed STDs were non-specific urethritis (non-gonococcal, non-chlamydial, non-trichomonas) and gonococcal urethritis, while the most prevalent STD diagnosed among Italian patients was genital warts. These differences remained after adjusting by age and sex. Second, the HIV seroprevalence among the foreigners was half that of Italian STD patients.

The increasing number of immigrants, the high proportion of immigrants among STD patients, and the differences observed for this population regarding the epidemiological and clinical patterns for STDs prompted us to develop a specific sentinel surveillance system for the control of STDs in this population.

METHODS

The STD Surveillance System for Foreigners began in January 1991 with the following objectives.

(a) Short-term objectives

- (i) To study the distribution and relative frequency of single STDs;
- (ii) monitor HIV infection;
- (iii) identify variations in trends.

(b) Long-term objectives

- (i) Develop diagnostic and therapeutic protocols primarily focused on the specificity of laboratory tests and antibiotic resistance;
- (ii) evaluate the adequacy and accessibility for immigrants of the health services for STDs;
- (iii) establish an STD prevention programme, including the development of materials that provide information simply and clearly.

The STD Surveillance System for Foreigners is a sentinel surveillance system and consists of five centres of the 'Italian Society for Migration Medicine (SIMM)' which provide care for immigrants located in five large Italian cities: Genoa, Milan, Bologna, Rome, and Palermo, where over 40% of all immigrants live [7]. Each SIMM centre collaborates with an STD clinic in each of the five cities, which provides laboratory and clinical support.

The inclusion criteria are: being born in a country other than Italy (including both permanent residents and temporary visitors), having a newly diagnosed STD, and not being seen for the same STD in the previous 90 days.

Table 2. *Foreigners with STDs by continent of origin: STD Surveillance System, Italy, 1990–5*

Continent	No. of cases	%
Europe	1016	25.2
Africa		
North	1421	35.3
Central	349	8.7
South	351	8.7
The Americas		
North (USA and Canada)	56	1.4
Centre	94	2.3
South	443	11.0
Asia	278	6.9
Australia	22	0.5
Total	4030	100.0

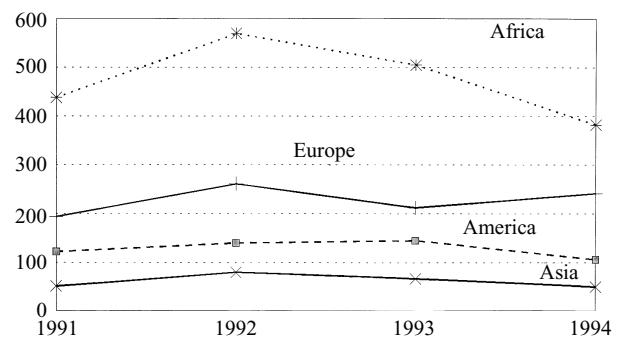


Fig. 1. Foreign STD patients by year and continent of origin. (STD Surveillance System, Italy, 1991–4).

The data collection forms used by the five participating STD clinics are the same as those used by the National STD Surveillance System [8]. Briefly, data from each patient with a newly diagnosed STD are recorded on a form which includes anonymous information for each individual. Information on demographics, level of education, behavioural practices, previous STDs, place of contagion, present disease, and method used for the diagnosis was collected. Every patient is offered an HIV antibody test.

A study protocol was prepared and agreed upon by all the directors of the participating centres. For each STD, a case definition with minimal clinical and laboratory criteria was developed [8]. A list of the diseases included in the surveillance system together with diagnostic criteria is reported in Table 1.

Forms are sent each month to the coordinating centre (Istituto Superiore di Sanità [The National Institute of Health of Italy] Rome), where data input

Table 3. Characteristics of the STD patients by area of origin: STD Surveillance System, Italy, 1990–5

	Europe	North America	Central-South America	Africa	Asia
No.	1016	56	537	2121	278
Mean age \pm s.d.	30.2 \pm 9.8	29.2 \pm 7.0	29.9 \pm 7.2	30.3 \pm 7.5	30.7 \pm 7.5
Males (%)	57.4	80.4	46.4	84.4	70.1
Primary school (%)	47.8	21.4	51.4	58.3	59.7
Heterosexuals (%)	90.6	66.0	81.2	94.3	96.0
Injecting drug users (%)	3.3	3.6	5.2	1.3	0.7
Median no. of partners (last 6 months)	1	1	2	2	1
No condom use (%) (last 6 months)	66.2	60.7	58.7	78.2	81.7
Previous STDs (%)	20.8	30.4	25.3	18.4	19.4

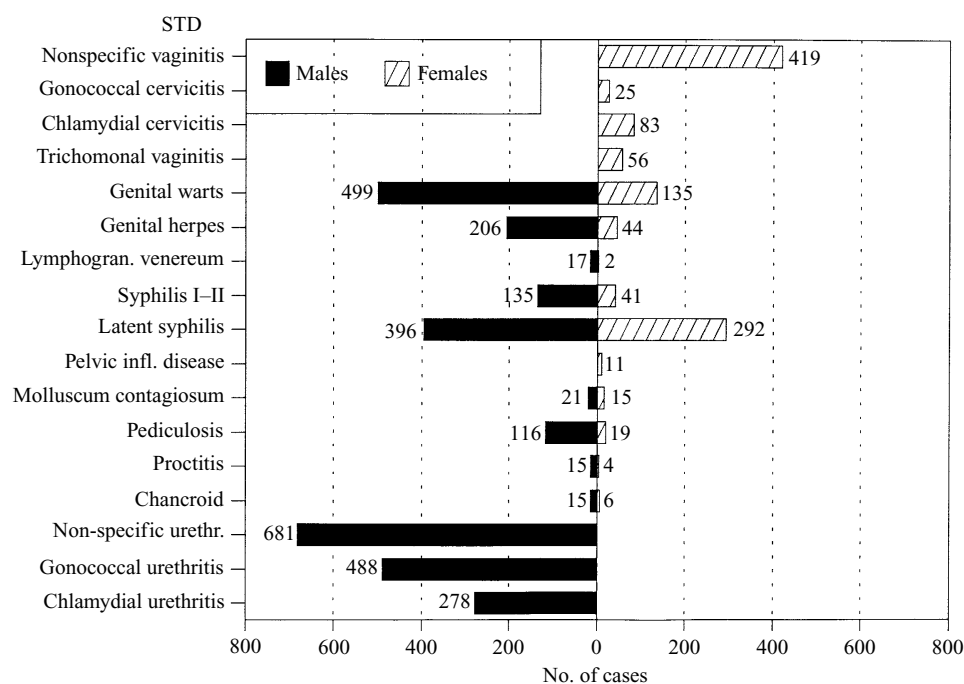


Fig. 2. Cases of STDs by sex among foreigners (STD Surveillance System, Italy, 1991–5).

and statistical and epidemiological analyses are performed. The present study includes data reported to the Surveillance System for Foreigners between January 1991 and June 1995.

RESULTS

From January 1991 to June 1995, a total of 4030 foreigners with a new STD episode were reported to the Surveillance System for Foreigners (Table 2). The median age for foreigners was 29 years, and 71.3% were males. During the study period, the annual number of patients remained relatively stable for all the areas of origin, except for Africa, for which there was a decrease beginning in 1992 (Fig. 1).

Five hundred and fifty-eight (13.8%) were illiterate, while 2183 (54.2%) had only a primary school degree (8 years of full-time education). Heterosexuals accounted for 91.3% ($n = 3681$) and injecting drug users (IDUs) for 2.3% ($n = 93$). A previous STD was reported by 816 individuals. More than one sexual partner in the last 6 months was reported by 2009 patients, and 2923 reported not having used condoms in the last 6 months. The main socio-demographic and behavioural characteristics of patients by area of origin are summarized in Table 3.

Distribution of STDs by sex is shown in Figure 2. The most frequent diagnoses among men were non-specific urethritis (negative for *N. gonorrhoeae* and *C.*

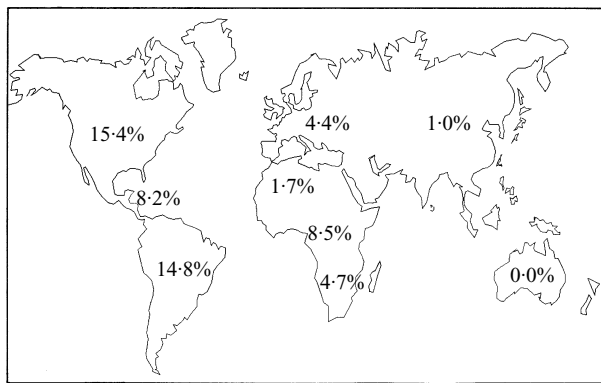


Fig. 3. HIV prevalence by geographic area among foreigners with STDs (STD Surveillance System, Italy, 1991–5).

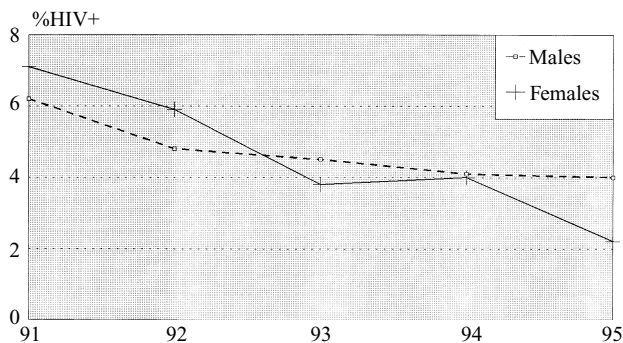


Fig. 4. Proportion of HIV-positive foreigners with STDs by year and sex (STD Surveillance System, Italy, 1991–5).

trachomatis), genital warts, and gonococcal urethritis; among women, non-specific vaginitis (negative for *N. gonorrhoeae*, *C. trachomatis*, and *T. vaginalis*), latent syphilis, and genital warts were the most common. Of the 513 cases of gonococcal infection, 371 (72.3%) were diagnosed among Africans and Asians.

Overall 2776 patients acquired the STD in Italy, while almost all (95%) of the remaining 1254 acquired the disease in their continent of origin. The most frequent disease acquired in Italy was non-specific urethritis ($n = 522$, 18.8%; $P < 0.0001$), whereas the most frequent one acquired abroad was latent syphilis ($n = 454$, 36.2%; $P < 0.0001$).

Among the 3005 patients who underwent HIV testing 149 were HIV positive, with an overall HIV prevalence of 5.0% (95% CI 4.2–5.8). However, the seroprevalence varied widely depending on the continent of origin, ranging from 0% (0/22) among persons born in Australia to 1% (2/197) in Asia, 3.3% (55/1643) in Africa, 4.4% (31/708) in Europe, 13.6% (55/404) in Central–South America, and 15.4% (6/39) among those originating from North America (United States and Canada) (Fig. 3). The HIV prevalence rate was 3.5% (73/2084; 95% CI

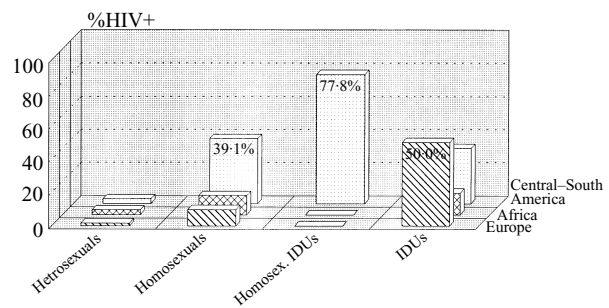


Fig. 5. Proportion of HIV-positive foreigners by exposure category and area of origin (STD Surveillance System, Italy, 1991–5).

6.5–10.2) among individuals who acquired the STD in Italy and 8.4% (77/921; 95% CI 2.7–4.3) among those who acquired the STD abroad ($P < 0.0001$). The proportion of HIV-positive persons decreased over time, especially among women (Fig. 4).

The analysis of the proportion of HIV-positive individuals by exposure category and area of origin (calculated only for the three geographical areas with more than 400 patients reported, i.e. Central–South America, Africa and Europe) showed very high HIV-positivity rates among homosexuals and homosexual IDUs from Central–South America, with 39.1% (25/64) and 77.8% (7/9) seropositive individuals, respectively (Fig. 5).

DISCUSSION

There is no official information regarding the number of cases of infectious diseases among foreigners in Italy. For this reason, it is not possible to define the magnitude or the relevance of the STD cases reported to the Surveillance System. However, a survey that we conducted in 1993 with the collaboration of six SIMM centres showed that foreigners with a clinically diagnosed or suspected STD accounted for 2.5% (938/37252) of all persons attending these centres for health assistance (B. Suligo et al., unpublished data).

In the first years of activity all the short-term objectives of the System have been achieved, while some of the long-term objectives (evaluation and improvement of health services, development of information materials) have been partly achieved in some centres.

Our results show that foreigners attending Italian STD clinics are mainly young males who come from Africa. As mentioned, the most frequent diagnosis

among men was non-specific urethritis, and among women non-specific cervical vaginitis. This finding suggests that further investigation of the aetiological agents involved in the non-specific genital infections should be conducted.

Our study did not include testing the susceptibility of *N. gonorrhoeae* isolates to antimicrobial agents. Some recent studies have shown conflicting data on the prevalence of PPNG (penicillinase producing *N. gonorrhoeae*) strains in Italy: the percentages reported range from 0 to 30.8%, depending on the geographic area and on the year in which the study was performed [9, 10]. It is known that in Africa and in Asia there is a high circulation of PPNG strains. Our data show a high number of gonococcal infections and an elevated proportion of Africans and Asians among these (72.3%), suggesting that routine testing for antimicrobial resistance of gonococcal strains among foreigners may be useful in providing insight into the high variability of the distribution of resistant strains in Italy.

The high HIV prevalence among patients coming from the Americas and from Central Africa and among those who acquired the STD abroad stresses the need to offer HIV testing to STD patients and to other individuals with behaviours at risk for acquiring HIV infection coming from these areas, together with thorough pre- and post-test counselling focused on behaviours at risk for acquiring and transmitting HIV and/or other sexually transmitted infections.

Experience with the immigrant population has also raised a number of important issues regarding the provision of health care, which could possibly be improved in the following ways: (a) providing easy access to public clinics (free daily access, opening hours compatible with foreigners' work-free hours); (b) increasing the confidence of foreign patients towards local health facilities, dissipating their fears regarding their illegal status, when present; (c) providing health-care personnel that speak English, French, Spanish, or other widely spoken languages; (d) overcoming legal problems resulting in the lack of access to free clinical assistance and/or laboratory diagnosis and treatment within the public health service.

All these practical problems may result in a poor access to health-care services (as shown by studies performed in some Western countries) [11–13], which can lead to a high rate of chronic STDs due to lack of appropriate treatment and which may contribute to their spread [14].

Most of these topics were discussed in a Consensus Conference organized by the SIMM and held in Italy in 1992. All participants were physicians working in organizations which offer health assistance to immigrants. A consensus paper was developed with recommendations for improvement in social and health care for immigrants (including issues regarding STDs and HIV infection), which has prompted the Ministry of Health to allocate new funds for the health assistance of immigrants [15]. Moreover, in November 1995, as a consequence of a number of initiatives and proposals in favour of immigrants' problems, the Ministry of Health passed a law offering free health assistance to illegal immigrants [16].

ACKNOWLEDGEMENT

We would like to thank Mark Kanieff for revising the text.

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