## **OPINION ARTICLE**

# **Sexually Transmitted Diseases and Immigration in Spain**

### C Postigo

Servicio de Dermatología, Hospital Universitario 12 de Octubre, Madrid, Spain

Sexually transmitted diseases (STD) are a high priority problem on a global scale, with more than 330 million cases reported each year.1 This is due both to their impact on the physical and mental health of sufferers, and to their repercussions on fertility, neoplasia, and transmission of the human immunodeficiency virus (HIV). Since the middle of the 1990s, the European Union (EU) has experienced a significant and sustained increase in STDs, especially acute bacterial STDs, with increases focused among the youth population, ethnic minorities, and gay men.2 But we find monitoring systems are highly heterogeneous and in general deficient when attempting to compare trends in the distribution of STD between countries.3 Only the United Kingdom has a national network of STD centers whose statistics are integrated into national monitoring programs. In other EU countries, including Spain, information is based on a mixture of sentinel surveillance and compulsory notifications from clinics or laboratories without even a standard definition of cases.

In Spain, epidemiological surveillance of STDs is undertaken nationally on a weekly basis with contributions from the autonomous communities under the system of diseases requiring obligatory declaration. This has estimated coverage of 50% of all cases diagnosed and uses most up to date microbiological information system to process data from 46 laboratories in 12 autonomous communities covering 25% of the population.<sup>3</sup> Despite underreporting, these systems have remained stable over time, and they are therefore sensitive to change. Thus, data collected in recent years show a clear increase in rates of notifiable STDs (though with a slight delay in relation to other EU countries), above all syphilis, which has shown an increase since 2003 (Figure 1).4 However, as no population data is supplied, these systems do not allow for the identification of risk groups.

Other valuable information is obtained through a network of free voluntary attendance STD centers, which provide more extensive information on STDs and associated syndromes (viral STDs, urethritis, cervicitis), as well as sociodemographic data and information on sexual behavior,

Correspondence:
Concepción Postigo Llorente.
Servicio de Dermatología. Hospital Universitario 12 de Octubre.
Planta Baja del Hospital Materno-Infantil.
Ctra. Andalucía, km 5,4. 28041 Madrid.
Spainconcha.postigo@telefonica.net

Manuscript accepted for publication June 6, 2007.

while also participating in monitoring the prevalence of HIV infection. Studies produced by these centers are based on people who presumably present higher-risk sexual practices than the general population and confirm the growing trends in serious bacterial STDs, especially infectious syphilis, which, above all, affects gay men and is associated with coinfection with HIV in 40% of cases.<sup>5-7</sup> This situation has also been the case for many European and North American cities since the late 1990s. The trend is attributed to changes in risk behavior within this group, due as much to the success of antiretroviral therapy as to the ease of meeting new sexual contacts over the Internet.<sup>8,9</sup>

Against this backdrop, although again lagging behind other countries, Spain has seen the mass arrival of immigrants since the early 1990s, such that in January 2007 they already constituted 9.68% of the census population and numbers exceeded 12% in some communities.<sup>10</sup> Although the immigrant population is very heterogeneous, there has recently been a predominance of new arrivals from developing countries where the prevalence of STDs in the general population is very high. Given the lack of notification systems in these countries, evidence is provided by the prevalence of syphilis serology in pregnant women: rates in Spain range from 0 to 3.38 per 1000, 11,12 while in South America and the Caribbean they are at least 10 to 20 times higher—oscillating from 1% in Peru to 6.1% in Paraguay with incidences of congenital syphilis of up to 12 per 1000 per year in Honduras.<sup>13</sup> In sub-Saharan Africa prevalence varies from 2.4 to 17.4%.<sup>1,14</sup> Furthermore, the conditions which cause migration, like human trafficking, or simply social, economic, and emotional instability, mean that once in Spain some groups of immigrants may be more vulnerable to STDs, and preventive action should be focused on these groups.

Attempts to identify at-risk groups could be based on *a*) analysis of samples from the general population, *b*) studies from STD and HIV centers, and *c*) extrapolation from data on the sexual transmission of HIV infection.

Very few studies have been carried out in the general population but those that have confirm that the prevalence of STDs is far higher amongst certain groups of persons of foreign origin than among Spaniards: in 1999 in Ceuta—where most of the immigrants come from Africa—rates of syphilis amongst the autochtonous population were 4.1 per 100 000 as compared to 1081 per 100 000 among immigrants.<sup>15</sup> A similar situation can be seen in Melilla, which, according to the Spanish

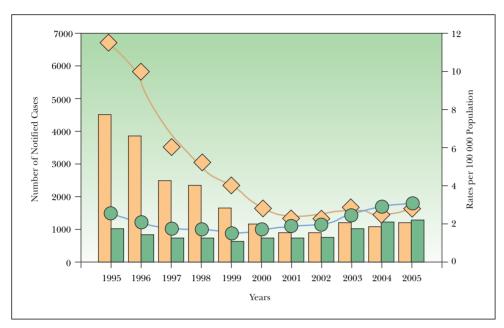


Figure 1. Incidence of sexually transmitted infection. Number of cases declared and rates per 100 000 inhabitants. Spain 1995-2005. Orange bars indicate number of cases of gonococcal infection; orange squares, rates of gonococcal infection; green bars, number of cases of syphilis; green circles, rates of syphilis. Source: Spanish system for diseases requiring obligatory declaration.4

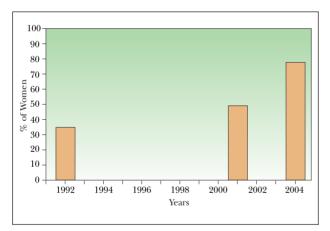


Figure 2. Proportion of female sex workers of foreign origin in Spain.

weekly epidemiological bulletin, had the highest level of syphilis in Spain: 24.39 per 100 000 compared with an overall rate of 3.39 per 100 000. In another study produced by a family planning center in Alicante, the prevalence of infection with high-risk human papillomavirus in women from South America was 3 times that of Spanish women, following adjustment for age, number of partners, and reason for consultation.<sup>17</sup>

Data contributed by STD centers show a notable increase in the number of immigrants treated and revealed that most female sex workers were of foreign origin, as were, to a lesser extent, their male counterparts. In 2000, 31.7% of all people consulting for an HIV test in 18 STD centers were immigrants, 18 compared with 19% in 1988. 19 Two years later, at the STD centre in Barcelona, 48% of all

STDs diagnosed was in people of foreign origin.<sup>5</sup> These immigrants come above all from Latin America (74%), followed by sub-Saharan Africa (10%) and Eastern Europe (10%). Compared with Spaniards attending these centers, in the immigrant population there is a higher proportion of heterosexuals (86% vs 71%) and women (61% vs 36%), and of the women, 47% of immigrants in that group were sex workers compared with 6% of the Spanish women. The prevalence of syphilis in the immigrant population is similar to that in their countries of origin (3.1%, compared with 1.1% in Spaniards), while HIV infection is no different to the rate in Spaniards (1.8% vs 1.7%) as most of the immigrants come from countries where rates are lower than in Spain, the exception being sub-Saharan Africans (8%) 18,19

Concentrating on samples of female sex workers attending STD-HIV centers, the proportion of those of foreign origin has gone from 46% in 1988 to 83.3% in 2001<sup>20-22</sup> (Figure 2). Most of these (89% to 96%) are from Latin America, followed by Eastern Europe and sub-Saharan Africa, and become sex workers in clubs, brothels, or saunas on arrival in Spain. As they do not take intravenous drugs, prevalence of HIV infection is low (0.2% to 0.4%), except among sub-Saharan Africans, where it reaches 9%. Most use condoms with clients but not in their private lives, hence the number of voluntary terminations of pregnancy amongst them is very high (38%), as is infection with the human papillomavirus (39%). The incidence of other STDs (above all nongonococcal cervicitis) stands at between 11% and 18% and is related to the number of sexual partners other than clients. As for male sex workers, in a study carried out in 18 HIV testing clinics, 67% were of foreign origin, mostly

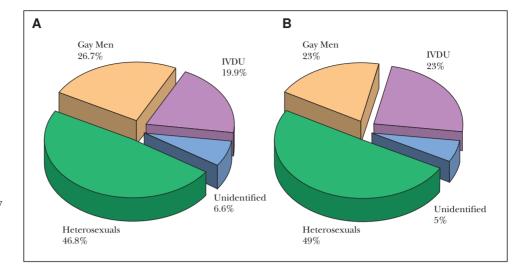


Figure 3. Mechanisms of transmission in new cases of infection with the human immunodeficiency virus. A, In Catalonia 2001-2003.<sup>27</sup> B, In 5 autonomous communities 2000-2004.<sup>26</sup> IVDU indicates intravenous drug users.

Latin American.<sup>23</sup> However, this type of study may be limited by the lack of access in the most vulnerable immigrants—those in street prostitution, threatened with extradition, unable to speak Spanish, or facing sociocultural barriers preventing them from consulting the health services. Such people very probably present different risks in terms of exposure to drugs, STDs, and HIV infection.<sup>24</sup> In Spain there is very little information on people working in street prostitution. In 1998, 44% of transvestites and transsexuals picked up on the streets of Madrid were of foreign origin, mostly Ecuadorian, and 21% of them were infected with HIV.<sup>25</sup> This group plays an important role in the sexual transmission of HIV, especially among gay men as they have a high frequency of unprotected sexual practices and drug consumption.

There is no national register of HIV infection, but where data is available for autonomous communities (the Basque Country, the Canary Islands, Catalonia, Ceuta, Madrid, Navarre, and Rioja) there has been a reduction of 70% in new diagnoses since the 1990s, <sup>26</sup> such that Spain has gone from having the highest national level of AIDS in Europe to a mid to low level in terms of new HIV infections (rates of 50 to 65 per million). This is mainly due to a fall in HIV transmission among intravenous drug users and, to a lesser extent, amongst gay men, whereby heterosexual transmission has become the leading mode of infection, responsible for 46% to 49% of new infections<sup>26,27</sup> (Figure 3).

In this context, according to figures from 4 autonomous communities, the proportion of infections with HIV amongst people from other countries increased from 25% per year in 2001 to 37% in 2004. Nonetheless, the number of new diagnoses of HIV infection among people of foreign origin was maintained with barely any change for this period, and at levels below those of the autochthonous population. As stated, HIV prevalence among immigrants is similar to

that of Spaniards in the same risk group, except among those of sub-Saharan African origin and in Latin American males, both heterosexual and homosexual. A study from a network of HIV test centers in 18 cities in Spain showed that at least 33% of immigrants became infected in Spain and, as is the case in other European countries, most Latin American males were infected by homosexual transmission and southern Africans by heterosexual transmission. See 18

The same study indicated that the risk of seroconversion in Spain is now 8 times higher in sub-Saharan Africans and 2.7 times higher in Eastern Europeans compared with that of the Spanish population and those of other origins with the same degree of exposure.<sup>29</sup>

Other EU nations are experiencing an increase in diagnosis of HIV infection due to sexual transmission in immigrants.<sup>30</sup> The percentage of immigrants is higher in these countries than in Spain and with a far higher proportion of southern Africans. It seems logical to think that this situation will not occur in Spain in the short term, as immigration is currently dominated by Latin Americans and North Africans, where HIV prevalence is even lower than in Spain. But what is very clear is that the proportion of immigrants at risk of acquiring STDs is higher than that of the Spanish population and that, unlike other countries,<sup>31</sup> there is no clear definition here of the groups that are most vulnerable to STDs or HIV infection. Therefore, it is essential that we extend and improve STD reporting nationally to include data that can be used to identify risk groups. As dermatologists we have no excuse but to do this and thus to provide an appropriate basis for real understanding of the situation and the development of pertinent preventive measures.

#### Conflicts of Interest

The author declares no conflicts of interest.

### References

- WHO/CDS/EDC/2001. Global prevalence and incidence of selected curable Sexually Transmitted Infections. http://www.who.int/hiv/pub/sti/who\_hiv\_aids\_2001.02.pdf. Accessed April 29, 2007.
- Fenton KA, Lowndes CM, the European Surveillance of Sexually Transmitted Infections (ESSTI). Recent trends in the epidemiology of sexually transmitted infections in the European Union. Sex Transm Infect. 2004;80:255-63.
- 3. Lowndes CM, Fenton KA, the ESSTI (European Surveillance of STI) Network. Surveillance systems for STI in the European Union: Facing a changing epidemiology. Sex Transm Infect. 2004;80:264-71.
- Ministerio de Sanidad y Consumo. Instituto de Salud Carlos III. Centro Nacional Epidemiología. Vigilancia epidemiológica de las infecciones de transmisión sexual. Evolución en el periodo 1995-2005. Noviembre 2006: 1-6. http://www.isciii.es/htdocs/pdf/its.pdf. Accessed May 2, 2007.
- Val Mayans M, Sanz Colomo B, Loureiro Varela E, Armengol Egea P. Infecciones de transmisión sexual en Barcelona más allá del 2000. Med Clin (Barc). 2004;122:18-20.
- Menéndez B, Ballesteros J, Clavo P, Romero J. Aumento de la sífilis y de la infección gonocócica en varones homosexuales o bisexuales en Madrid. Med Clin (Barc). 2005;125:756.
- Vall-Mayans M, Casals M, Vives A, Loureiro E, Armengol P, Sanz B. Reemergencia de la sífilis infecciosa en varones homosexuales y coinfección por el virus de la inmunodeficiencia humana en Barcelona, 2002-2003. Med Clin (Barc). 2006;126:94-6.
- 8. Ashton M, Sopwith W, Clark P, McKelvey D, Lighton L, Mandal D. An outbreak no longer: factors contributing to the return of syphilis in Greater Manchester. Sex Transm Infect. 2003;79:291-3.
- Stolte IG, Dukers NH, de Wit JB, Fennema JS, Coutinho RA. Increase in sexually transmitted infections among homosexual men in Amsterdam in relation to HAART. Sex Transm Infect. 2001;77:184-6.
- Inmigración en España. http://es.wikipedia.org/wiki/ Inmigraci %C3 %B3n\_en\_Esp%C3%B1a. Accessed April 30, 2007.
- Martín Martínez A, Álvarez Sánchez M, Reyes Suárez D. Características epidemiológicas de la sífilis congénita en Canarias. ¿Es necesario el cribado? Progr Obst Ginecol. 2007;50:15-22.
- 12. Gutiérrez-Zufiarrue N, Sánchez-Hernández J, Muñoz S, Marín R, Delgado N, Sáenz MC, et al. Seroprevalence of antibodies against Treponema pallidum, Toxoplasma gondii, rubella virus, hepatitis B and C virus and HIV in pregnant women. Enferm Infecc Microbiol Clin. 2004;22: 512-6.
- Valderrama J, Zacarías F, Mazin R. Sífilis materna y sífilis congénita en América Latina: un problema grave de solución sencilla. Rev Panam Salud Publica. 2004;16:211-7.
- Mullick S, Watson-Jones D, Beksinska M, Mabey D. Sexually transmitted infections in pregnancy: prevalence, impact on pregnancy outcomes, and approach to treatment in developing countries. Sex Transm Infect. 2005;81:294-302.

- 15. Ibarra V, Oteo JA. ¿Otra vez la sífilis? Med Clin (Barc). 2003; 120:295-6.
- 16. Servicio de vigilancia epidemiológica. Centro Nacional de epidemiología. Comentario epidemiológico de las Enfermedades de Declaración Obligatoria y Sistema de Información Microbiológica. España: año 2005. Boletín Epidemiológico Semanal semana 38. 2006;14:193-204.
- 17. González C, Ortiz M, Canals J, Muñoz L, Jarrín I, de la Hera MG, et al. Higher prevalence of human papillomavirus infection in migrant women from Latin America in Spain. Sex Transm Infect. 2006;82:260-2.
- 18. The EPI-VIH Study Group. HIV infection among people of foreign origin voluntarily tested in Spain. A comparison with national subjects. Sex Transm Infect. 2002;78:250-4.
- 19. Vall M, Grupo de las Infecciones de Transmisión Sexual y VIH en Atención Primaria. Infección por el virus de la inmunodeficiencia humana y otras infecciones de transmisión sexual en inmigrantes de Barcelona. Enferm Infecc Microbiol Clin. 2002;20:154-6.
- Belza MJ, Clavo P, Ballesteros J, Menéndez B, Castilla J, Sanz S, et al. Condiciones laborales, conductas de riesgo y prevalencia de infecciones de transmisión sexual en mujeres inmigrantes que ejercen la prostitución en Madrid. Gac Sanit 2004;18:177-83.
- Belza MJ on behalf of the Spanish Group for the Unlinked Anonymous Survey of HIV seroprevalence in STD patients. Prevalence of HIV, HTLV-1 and HTLV-2 among female sex workers in Spain, 2000-2001. Eur J Epidemiol. 2004;19:279-82.
- 22. Del Amo J, González C, Losana J, Clavo P, Muñoz L, Ballesteros J, et al. Influence of age and geographical origin in the prevalence of high risk human papillomavirus in migrant female sex workers in Spain. Sex Transm Infect. 2005;81: 79-84.
- 23. Belza MJ, the EPI –VIH study group. Risk of HIV infection among male sex workers in Spain. Sex Transm Infect. 2005;81:85-8.
- Pyett PM, Warr DJ. Vulnerability on the streets: female sex workers and HIV risk. AIDS Care. 1997; 9:539-47.
- 25. Belza MJ, Llacea A, Mora R, Castilla J, de la Fuente L, Cañellas S, et al. Características sociales y conductas de riesgo para el VIH en un grupo de travestis y transexuales masculinos que ejercen la prostitución en la calle. Gac Sanit. 2000;14:330-7.
- Castilla J, Sobrino P, Lorenzo JM, Moreno C, Izquierdo A, Lezaun ME, et al. Situación actual y perspectivas futuras de la epidemia de VIH y sida en España. An Sist Sanit Navar. 2006;29:13-25.
- 27. Romaguera A, Binefa G, Casabona J, García de Olalla P, Caylà J, Camps N, et al. Declaración de los nuevos diagnósticos de infección por el VIH en Cataluña. Implementación y resultados. Gac Sanit. 2005;19:356-62.
- 28. Barrasa A, Grupo EPI-VIH. Mecanismos de transmisión y lugar probable de adquisición de la infección por el VIH en inmigrantes. Gac Sanit. 2005;19 Supl 1:22.
- Sobrino P, Castilla J, Grupo EPI-VIH. Incidencia de seroconversiones al VIH en una cohorte de personas a riesgo 2000-2003. Gac Sanit. 2005;19 Supl 1:44.
- Elford J, Anderson J, Butuku C, Ibrahim F. HIV in East London: ethnicity, gender and risk. Design and Methods. BMC Public Health. 2006;6:150. http://

- www.biomedcentral.com/1471-2458/6/150. Accessed May 2, 2007.
- 31. Hughes G, Catchpole M, Rogers PA, Brady AR, Kihghorn G, Mercey D, et al. Comparison of risk factors for four

sexually transmitted infections: results from a study of attenders at three genitourinary medicine clinics in England. Sex Transm Infect. 2000;76:262-7.