Agnieszka Beata Serwin[1], Marta Koper[1], Magnus Unemo[2,3]

CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF MALES WITH SYPHILIS IN BIALYSTOK, POLAND IN 2008-2013

[1]Department of Dermatology and Venereology, Medical University of Bialystok, Poland
[2]WHO Collaborating Center for Gonorrhoea and other STIs, National Reference Laboratory for Pathogenic Neisseria, Örebro University Hospital, Örebro, Sweden
[3]Department of Laboratory Medicine, School of Medicine, Örebro University, Örebro, Sweden

ABSTRACT

INTRODUCTION. Men who have sex with men (MSM) contribute disproportionally to the spread of several sexually transmitted infections (STIs) in many European and other industrialised countries.
OBJECTIVE. To describe and compare clinical and epidemiological data on MSM and men who have sex with women (MSW) treated for syphilis in Bialystok, Poland in 2008-2013.
MATERIAL AND METHODS. Analyzed characteristics included the age, residency, marital status, professional activity, number of sexual contacts, relation to the source contact, stage of syphilis, concomitant STIs including HIV, adherence to follow-up visits and efficacy of partner notification and contact tracing.
RESULTS. Among 49 male patients with syphilis, 19 (38.8%) were MSM. The average age of MSM and MSW was 31.9 and 31.3 years (P>0.05), respectively. The majority of patients in both groups were residents of urban areas and single. More than five lifetime sexual partners were declared by 47.4% of MSM and 16.7% of MSW (P=0.01), and 73.7% and 60.0%, respectively (P>0.05), had only casual sexual relationship or steady partner but with additional casual sexual contact(s). Most of the syphilis cases were diagnosed during early symptomatic stage (in 84.2% of MSM and 56.7% of MSW; P>0.05). Other concomitant STIs were detected in 26.3% of MSM and 10.0% of MSW (P>0.05), and HIV infection – in 15.8% and 3.0% (P>0.05), respectively. Partner notification and contact tracing was not possible in 31.6% of MSM and 23.3% of MSW (P>0.05), and 21.1% MSM and 40.0% MSW (P>0.05) did not attend any follow-up visits.
CONCLUSIONS. MSM constituted a substantial proportion of male patients with syphilis, had more sexual contacts, including casual contacts, and more concomitant STIs, including HIV compared to MSW. The follow-up and contact tracing was suboptimal in MSM but also in MSW. Taking into consideration the important role of MSM in the spread of STIs, including syphilis, it is crucial to continue the present study but also to conduct similar investigations on national level.

Key words*: syphilis, men who have sex with men, men who have sex with women, sexually transmitted infections, HIV, Bialystok, Poland*

INTRODUCTION

Men who have sex with men (MSM) disproportionately contribute to the spread of several sexually transmitted infections (STIs) in many European and other industrialised countries, which has been reported to be due to several behavioural factors, e.g., frequent change of sexual contacts, particularly casual contacts, using internet as a venue to search for anonymous sexual contacts, the use of recreational drugs before and during intercourse (1,2).

Furthermore, the introduction of a combination antiretroviral therapy has contributed to the enhancement of risky sexual behaviours in this group and, consequently, to the outbreak of STIs epidemics, including syphilis among MSM since late 1990s particularly in larger cities (1,3). At first, the outbreaks of syphilis in Europe, mainly due to MSM, were observed in Germany (Hamburg) in 1997 and in United Kingdom in 1999 (Brighton and Manchester) (4,5). Since 2000, syphilis epidemics or significantly increased incidence of syphi-

lis have been reported in several additional Western European countries: Northern Ireland, Denmark, Belgium, Sweden, Norway, Spain and France with MSM up to 75% of all syphilis patients (1,6-9).

In 2012, in the European Union (EU) and European Economic Area (EEA) MSM constituted 48% (4489 cases) of all reported cases of syphilis, 41% (15,091 cases) of gonorrhoea cases and 40% (11,877) of cases with HIV/AIDS (10,11). Worryingly, syphilis frequently co-exists with other STIs, including HIV, in this group of patients. According to results of studies conducted in Western Europe, the proportion of MSM with syphilis and concomitant HIV infection varied from 10% to nearly 60%, and those with syphilis and gonorrhoea – from 0.9% to 25% (1,6-8).

In Poland, in 2012 the incidence of reported syphilis cases was 2.5 per 100,000 population - 754 and 207 cases in males and females, respectively (10). Data regarding syphilis among MSM in Poland are mainly completely lacking in the international literature (English language) and also Polish papers discussing this issue in the Polish Medical Bibliography are very few, focusing mainly on HIV positive males and latest papers were published in the mid-1990s (12-16).

OBJECTIVE

The aim of this study was to describe and compare socio-demographic, clinical and epidemiological characteristics of male patients, i.e. MSM and men having sex with women (MSW), treated for syphilis at the Department of Dermatology and Venereology, Medical University of Bialystok and at the Regional Dermatological-Venereological Out-patients' Clinic in Bialystok, Poland in 2008-2013.

MATERIAL AND METHODS

All patients had a confirmed diagnosis of syphilis (17), which is in line with the EU/EEA case definition.

Analyzed characteristics included the age of patients, residency, marital status, profession, number of lifetime sexual contacts, relation to the source partner (casual or steady), stage of syphilis, concomitant STIs including HIV, adherence to follow-up visits and partner notification. For statistical analysis, Student t-test and a test of proportions were used (Statistica 9.0 PL software, Statsoft, Cracow, Poland) and the level of significance was set at α=0.05.

RESULTS

During 2008-2013, 49 male syphilis patients were treated and 19 (38.8%) of these were MSM. The high-

Table I. Main socio-demographic characteristics of male syphilis patients in Bialystok, Poland in 2008-2013

		MSM* No. (%)	MSW* No. (%)	P value (MSM vs. MSW)
All		19 (38.8)	30 (61.2)	
Age	Below 25 years	3 (15.8)	6 (20.0)	0.72
	25-34 years	12 (63.1)	12 (40.0)	0.12
	Over 34 years	4 (21.1)	12 (40.0)	0.17
Residency	City ≥200,000 inhabitants	7 (36.8)	11 (36.7)	0.99
	City <200,000 inhabitants	8 (42.1)	11 (36.7)	0.68
	Rural areas	4 (21.1)	8 (26.6)	0.68
Marital status	Single	18 (94.7)	22 (73.3)	0.053
	Married or in steady relationship	1 (5.3)	8 (26.7)	0.057
Selected professional activity	Unemployed	4 (21.1)	6 (20.0)	0.91
	Farmer	0	3 (10.0)	0.15
	Student	1 (5.3)	3 (10.0)	0.56
	Tradesman	2 (10.5)	0	0.07
	Driver	0	4 (13.3)	0.049

*MSM – men who have sex with men, MSW – men who have sex with women

Table II. Data on sexual history for male syphilis patients in Bialystok, Poland in 2008-2013

		MSM No. (%)	MSW No. (%)	P value (MSM vs. MSW)
Number of lifetime sexual partners	1	3 (15.8)	8 (26.6)	0.18
	2-5	7 (36.8)	17 (56.7)	0.17
	>5	9 (47.4)	5 (16.7)	0.01
Relationship to the source sexual contact	Casual contact only	8 (42.1)	11 (36.7)	0.73
	Steady partner plus casual contact	6 (31.6)	7 (23.3)	0.49
	Steady partner only	5 (26.3)	12 (40.0)	0.32

Table III. Stage of syphilis and concomitant STIs, including HIV, in male syphilis patients in Bialystok, Poland in 2008-2013

		MSM No. (%)	MSW No. (%)	P value (MSM vs. MSW)
Stage of syphilis	Primary	2 (10.5)	3 (10.0)	0.95
	Secondary	14 (73.7)	14 (46.7)	0.06
	Early latent	3 (15.8)	8 (26.7)	0.37
	Late	0	5 (16.7)	0.058
Concomitant STIs*		5 (26.3)	3 (10.0)	0.14
HIV infection		3 (15.8)	1 (3.0)	0.10

* *Chlamydia trachomatis* infection was diagnosed in two MSM and two MSW, anogenital warts in two MSM and in one MSW, and gonorrhoea in one MSM.

est proportion of MSM patients was noticed in 2009 (53.8%), 2011 (50.0%) and 2013 (44.4%). For comparison, in the same time period also 20 females were treated for syphilis.

The socio-demographic data of the MSM and MSW patients are detailed in table I. Briefly, the average age of the MSM was 31.9 years (median 28 years; range: 18 – 54 years) and that of the MSW 31.3 years (median 29 years; range: 17 – 64 years) (P>0.05). The majority of patients in both groups were residents of urban areas and single (P>0.05; table I). Two foreigners were in the group of MSW: one from Belarus and one refugee from Chechen Republic, Russia. A tradesman and a driver were most frequent professions in MSM and MSW, respectively.

Data on sexual history are shown in table II. The maximum number of lifetime sexual partners was 40 in a MSM and 15 in a MSW. Significantly higher proportion of MSM than MSW had more than five lifetime sexual partners (P=0.01).

Main data on stage of syphilis and concomitant STIs are shown in table III. Men in both groups were most frequently diagnosed during early symptomatic syphilis. Late syphilis was diagnosed only in MSW. Concomitant *Chlamydia trachomatis* infection was diagnosed in two MSM and two MSW, anogenital warts in two MSM and in one MSW, and gonorrhoea in one MSM. HIV infection was more frequent in MSM than in MSW (P>0.05; table III). All HIV cases were detected prior to diagnosis of syphilis.

Contact tracing was completed in only three (15.8%) MSM compared to 10 (33.3%) MSW (P>0.05). In 10 (52.6%) MSM and 13 (43.3%) MSW, contact tracing was initiated but not completed, and in six (31.6%) MSM and seven (23.3%) MSW not performed at all (P>0.05).

Follow-up was completed in seven (36.8%) MSM and in 13 (43.3%) MSW (P>0.05), and four (21.1%) MSM and 12 (40.0%) MSW did not attend any follow-up visit (P>0.05). Follow-up is ongoing in the remaining patients.

DISCUSSION

The average incidence of syphilis in the EU/EEA in 2012 was 5.1 cases per 100,000 inhabitants and nearly half of the cases were diagnosed among MSM (10). The percentage of MSM among the syphilis cases varied substantially between countries: from below 10% (e.g. Lithuania, Romania) to over 70% (e.g. France, the Netherlands, Denmark and Ireland) (10). In Poland, the reported incidence of infectious syphilis in the 21st century has been low and ranged from 1.6 (in 2005) to 2.6 (in 2009 and 2013) per 100,000 inhabitants (18). The incidence in Podlaskie Province (capital city: Bialystok) has mainly been lower (in average 2.5-fold lower in 2001-2013, with exception of 2011 when it was over 20-fold lower) than the national incidence in Poland (Figure 1). In neighbouring countries, the incidence in 2012 was higher and ranged from 3.1 in Czech Republic through 5.4 in Germany, 7.6 (in Slovakia and Lithuania) to 10.3 in Belarus, 11.2 in Ukraine and 42.4 in Kaliningrad Oblast (10,19).

In Poland, until July 2013 the way of STI acquisition (e.g. MSM or MSW) was not reported, which is the reason that no data regarding the incidence of syphilis among MSM in the whole country exist. However, the Decree of the Minister of Health of July 10th 2013 (Dz. U. 13.848, July 26th 2013) introduced a new reporting form for STIs (the annex #4 of the Decree) in which the way of STI acquisition is included. Unfortunately, no contacts can be reported (20).

The present paper is the first in the international literature (English language) and also the first in Polish language since the mid-1990s discussing the problem of syphilis in MSM and MSW in Poland. The percentage of MSM among male patients with syphilis was signifi-

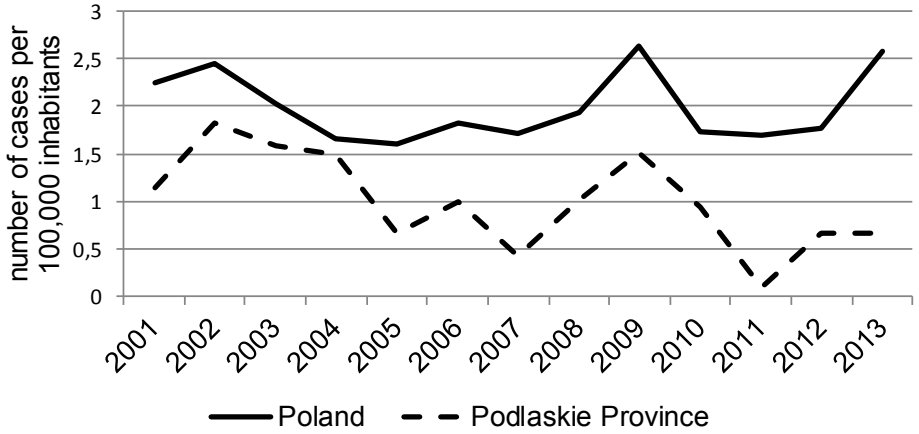

Figure 1. Incidence of early syphilis in Poland and in Podlaskie Province (capital city: Bialystok) in 2001-2013 (cases per 100,000 inhabitants)

cant and in two years was at least 50%. In 1967-1978, MSM constituted only 4.7% of all male syphilis patients treated at the Department of Dermatology in Cracow, which however might have been affected by a reluctance to disclose sexual orientation. Similarly to our findings those patients were most frequently diagnosed during early symptomatic syphilis (in 72.6% of cases) and casual contact was the main source of infection (12). In subsequent years (1978-1982), MSM were reported to constitute 16.3% of all male syphilis patients treated in Jelenia Gora and their proportion increased from 7.1% (in 1978) to 33.3% (1980) (13). Unfortunately, concomitant STIs were not considered in any of these studies. Among HIV-positive male patients treated also for syphilis at the Institute of Venereology, Warsaw in 1988-1995, 21 (72.4%) were reported as MSM (14). Similarly, in the present study, 75% of HIV-positive syphilis male patients were MSM. In 1990-1995, among HIV-positive patients (males and females) diagnosed in Prophylactic-Therapeutic Outpatient Clinic Centre for Diagnosis and Treatment of AIDS in Warsaw only 13% were MSM (17.2% of all male patients) and of those - 54.2% had also syphilis and/or gonorrhea (15). Thirty-six per cent of HIV-positive MSM diagnosed at the out-patient clinic of the Institute of Venereology in Warsaw were in the past or at present infected with syphilis (16).

The average age of MSM and MSW were almost the same and similar to reported in previous studies (4,7,8,12), however the proportion of patients over 34 years of age was almost twice higher in MSW compared to MSM. The majority of patients in both groups were residents of urban areas and were single. MSM had significantly more lifetime sexual contacts, including casual contacts, than MSW.

The over two-fold higher prevalence of STIs other than syphilis and, especially, several times higher prevalence of HIV in MSM than in MSW were of major concern and also in concordance with other international studies (1,3,6-8). In Poland, in 2012 MSM constituted the most important group with newly diagnosed HIV infection (70% of patients with known mode of transmission) – an increase by 9% as compared to 2011 and a three-fold increase as compared to the mean proportion in years 2006-2010, however the information of transmission route was not reported for 55.4% of cases (21).

Disquietingly, the contact tracing for the syphilis patients was suboptimal, especially in MSM – not a single sexual contact was examined in nearly one-third of these patients, which was due to the frequently anonymous character of partnership but also to the reluctance to disclose personal data of sexual contact(s). Similar difficulties in contact tracing in MSM have been reported in other international studies (22,23).

The follow-up was also suboptimal in both groups: a significant proportion of men, especially MSW, did not attend any follow-up visits.

The main limitations of the present study were: the small sample size (despite clear differences in frequencies, it was not possible to demonstrate statistical significance) and lack of data regarding place of infection (Poland vs. abroad). Nevertheless, the study will continue to increase the sample size.

CONCLUSIONS

MSM constituted a substantial proportion of the male patients with syphilis in Bialystok, Poland. The MSM had significantly higher number of lifetime sexual contacts, including casual contacts, compared to MSW. They also had substantially more frequent concomitant other STIs and HIV infection than MSW. Contact tracing and follow-up was suboptimal for MSM but also for MSW. Taking into consideration the crucial role of MSM in the spread of STIs in Poland and in EU/EEA, it is crucial to continue the present study but also to conduct similar studies at national level in Poland.

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Address for correspondence:
Ass. Prof. Agnieszka B. Serwin, M.D., Ph.D.
Department of Dermatology and Venereology
Medical University of Bialystok
14, Zurawia St.
15-540 Bialystok, Poland
e-mail: agabser@umb.edu.pl
Tel: +48 85 7409572, fax: +48 85 7409416