

# *Syphilis in Prague: analysis of the hospitalization records*

I. Kuklová, M. Kojanová, R. Divišová, V. Kaštánková and R. Pánková

## S U M M A R Y

Since 1990 we have observed a gradual steady increase of syphilis incidence in the Czech Republic, especially in larger cities and in border regions. In 2001, the total number of notified syphilis cases reached 1 376. Syphilis rate has risen from 1.6 per 100 000 inhabitants in 1990 to 13.7 per 100 000 inhabitants in 2001, which represents an 8-fold increase. The aim of the study was to review the hospitalization records of patients diagnosed with syphilis in Prague between 1999 and 2001. A total of 243 syphilis patients (92 men and 151 women) were diagnosed and treated at our department. Out of the above mentioned 151 women, 63 were pregnant. 18.9% patients, 15.2% women and 25% men presented as a result of partner notification. Symptomatic syphilis was seen in 45 (48.9%) men and 22 (14.6%) women. Dark field microscopy was positive in twenty (8.2%) cases. A total of thirty patients suffered from genital discharge. Three patients had gonorrhoea, two chlamydial infection. All the patients were HIV negative at the time of syphilis diagnosis. By the means of questionnaire inquiry, we obtained information about demographic and behavioural characteristics of our patients.

## *Introduction*

The population of the Czech Republic is approximately 10 million. In the last twelve years, considerable social, economic and political changes have taken place there. Simultaneously, there has been observed a spread of prostitution and drug use and an increase in the incidence of the sexually transmitted diseases (STDs).

Since 1990 we have seen a gradual steady increase of syphilis incidence in the Czech Republic, especially in larger cities and in border regions. Last year the total number of notified syphilis cases reached 1 376 (13,7

cases per 100 000 inhabitants). Syphilis rate has risen from 1,6 per 100 000 in 1990 to 13,7 in 2001, which represents an 8-fold increase (table 1). As far as regions are concerned, most cases were reported from Northern Bohemia and Western Bohemia, followed by the capital of Prague.

The Department of Dermatovenereology, First Medical Faculty, Charles University is the reference centre for the area of Prague and the surrounding regions. Roughly 9 000 STD examinations per year are carried

## **K E Y W O R D S**

**syphilis,  
incidence,  
risk  
behaviour,  
Prague**

out here. Czech legislation stipulates that syphilis patients have to be treated in hospital. The aim of the study was to review the hospitalization records of patients diagnosed with syphilis between 1999 and 2001 (1, 2).

## Materials and methods

A retrospective case note review of patients diagnosed and hospitalized with acquired syphilis between January 1999 and December 2001 was carried out at the Department of Dermatovenereology, First Medical Faculty, Charles University in Prague. The syphilis cases were diagnosed on the clinical symptoms, serology and dark field microscopy.

The patients suffering from syphilis were asked to fill in a questionnaire comprising questions concerning their age, reason for attending an STD clinic, education level, marital status, coitarche, sexual orientation, sexual practices, condom use, condom use with casual sex partners, paid sex, number of sexual partners over the year, STD history, source of information about safe sex, drug experience.

## Results

During the three-year period, a total of 243 syphilis patients (92 men and 151 women) were diagnosed and treated at our department. Out of the above mentioned 151 women, 63 were pregnant. 22 females were pregnant at the time of syphilis diagnosis, 41 underwent repeated protective treatment during pregnancy.

Foreigners constituted 23.5% of all our patients, most of them came from the countries of the former Soviet Union (17%).

The mean age in women was 25-29 years (38%) and in men 30-40 years /35%. Out of all our patients, 72 (47.7%) women and 19 (20.6%) men were unemployed, 45.7% women and 57.6% men were single, 13.2% women and 15.2% men were divorced.

Forty-six (18.9%) patients, 23 (15.2%) women and 23 (25.0%) men presented as a result of partner notification.

Symptomatic syphilis was seen in 45 (48.9%) men and 22 (14.6%) women. Twenty-three men and eight women presented with genital chancre, two men and two women with extragenital chancre, sixteen men and five women with macular rash, one woman with papular rash, two men and six women with condylomata lata, thirteen men and six women with lymphadenopathy.

Dark field microscopy was positive in twenty (8.2%) cases, eleven men and nine women.

A total of thirty patients suffered from genital discharge (16 men and 14 women). Three patients had gonorrhoea, two had chlamydial infection. All the pa-

**Table 1. Prevalence of syphilis in the Czech Republic**

year	abs.	per 100 000 population
1990	164	1,6
1991	249	2,4
1992	265	2,6
1993	233	2,3
1994	369	3,6
1995	433	4,2
1996	551	5,3
1997	604	5,9
1998	687	6,7
1999	731	7,1
2000	967	9,4
2001	1376	13,5

tients were HIV negative in the time of syphilis diagnosis. Only three HIV positive patients with syphilis have been diagnosed at our department so far, one in 1988 and two in 2002.

A total of 232 patients were treated with penicillin (benzathine penicillin or procaine penicillin). An alternative treatment was used in the case of penicillin allergy. Nine patients who were allergic to penicillin received doxycycline, one erythromycin, one azithromycin.

Jarisch-Herxheimer reaction occurred in 62 (25.2%) patients, 42 (45.7%) men and 20 (13.2%) women.

101 syphilis patients (40 men and 61 women) underwent the questionnaire inquiry with the following results: 12.9% patients referred consistent condom use, 8.9% had drug experience, 5% had intravenous drug experience, 5% were homosexuals, 12.9% were prostitutes, 14.9% reported a history of more than 10 sexual contacts in the preceding 12 months, 25.7% gave a history of casual first coitus (1).

## Discussion

The aim of the study was to define syphilis risk factors among the patients treated at the Department of Dermatovenereology in Prague.

We have observed some demographic and clinical differences between men and women. For example, the mean age of women was lower than that of men. There were more unemployed women among our patients. More men than women suffered from primary syphilis. The symptomatic syphilis was seen more often in men than in women because many pregnant women with latent syphilis underwent repeated protective treatment under hospitalization. Pregnant women are serologically screened twice during pregnancy, in the first and third trimester. The rising syphilis

morbidity among pregnant women is especially preoccupying. A high percentage of women practised sex for money. During the last decade, there haven't been any changes in the legislation concerning prostitution. Prostitution in the Czech Republic is still neither permitted nor prohibited, it is tolerated under certain circumstances, it is not considered a criminal offence. It is not defined which physician is responsible for regular checkups of prostituting persons, to what extent and in which scale these should be done and how often they should be repeated, taking into account the real financial calculation. There are no regulations concerning the health care of the prostituting persons.

In general, the proportion of foreigners among syphilis patients has a growing tendency. In 1990, foreigners constituted 5.4 % of the syphilis cases, in 1998 it was 17.6 %, most of them came from the former USSR.

It is apparent that after the social changes in November 1989, the relatively satisfactory incidence of venereal diseases in the Czech Republic came to an end. The syphilis incidence in the Czech Republic is lower than in the states of the former USSR but higher than in the countries of Western Europe (3, 4). For example, in the United Kingdom, the epidemiology of syphilis has been characterized by sporadic outbreaks affecting homosexual population co-infected with HIV (5,6). The majority of our cases are heterosexuals and HIV co-infections are very rare. From the epidemiological point

of view, the growth of the proportion of early syphilis is significant. In 1990, the early form represented 24.4 % of the total number of notified cases, in 1998 it was already 65.6 %. The reason for rising syphilis notification rate has to be sought in increased travel, immigration, prostitution, more open sex industry, western lifestyle, disintegration of the screening system and drug abuse.

Public health strategies to prevent syphilis, including maternal and fetal syphilis, are similar to those that focus on other STDs in the general population. These include early identification of infected individuals and high risk population groups, adequate treatment, identification of the infected partners and their treatment, modification of high risk behaviour, and promoting accessibility and use of health care (7).

## Conclusion

Since 1990 a steady increase of syphilis cases was observed in Prague. During the 1999-2001 period 243 syphilis cases were observed at the Dept. of Dermatology, First Medical Faculty, Charles University in Prague. Among 151 females 63 were pregnant. It is evident that social changes since November 1989 have had an impact on the increased incidence of syphilis.

## REFERENCES

1. ÚZIS ČR. Pohlavní nemoci 2001, Praha, 2002.
2. Kuklová I, Kaštánková V, Pánková R, Trýzna R: Analysis of sexual risk behavior among clients of venereology with specific concern to syphilis and HIV/AIDS. JEADV 1999, Suppl.2, 12: 346.
3. Borisenko KK, Tichonova LI, Renton AM. Syphilis and other sexually transmitted infections in the Russian Federation. Int J STD AIDS 1999; 10: 665-8.
4. Linglőf T. Rapid increase of Syphilis and gonorrhoea in parts of the former USSR. Sex Transm Dis 1995; 22: 160-1.
5. Lacey H B, Higgins SP, Graham D. An outbreak of early syphilis: cases from North Manchester General Hospital. Sex Transm Inf 2001; 77: 311-3.
6. Poulton M, Dean GL, Williams DI et al. Surfing with spirochaetes: an ongoing syphilis outbreak in Brighton. Sex Transm Inf 2001; 77: 319-21.
7. Genc M, Ledger WJ. Syphilis in pregnancy. Sex Transm Inf 2000; 76: 73-9.

## AUTHORS' ADDRESSES

*Ivana Kuklová, MD, PhD, Assist. Professor, Department of Dermatology, Charles University, U Nemocnice 2, Prague 2, Czech Republic  
e-mail: ikuklova@post.cz*  
*Martina Kojanová MD, same address*  
*Radmila Divišová MD, same address*  
*Vera Kaštánková MD, same address*  
*Ružena Panková MD, PhD, Assoc. Professor, same address*