

Epidemiology of syphilis in Latvia

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ABSTRACT

Background: The present paper discusses the epidemiology of syphilis and contains characterization of the increase of cases in Latvia.

Materials and methods: Epidemiologic, clinical and diagnostic data on cases of syphilis in Latvia have been summarized. Clinical diagnosis of suspected syphilis was confirmed by positive dark field examination or by positive serologic tests for syphilis.

Results: In 1993, there were 830 recorded syphilis cases in Latvia, in 1994 the number of cases amounted to 1521, in 1995 to 2357, in 1996 to 3124, in 1997 to 3008, in 1998 to 2597.

An analysis is given of syphilis patients according to the age and stage of the disease, secondary syphilis being prevalent.

Conclusions: It has been shown that the increase in syphilis cases is due to lack of prophylactic educational measures among the population. Comparative figures dating from various years are mentioned.

KEY WORDS

syphilis,
epidemiology,
incidence,
Latvia

Introduction

Syphilis has quite often been a problem of great concern in Latvia and in a number of other countries (1,3,5). Analyzing the incidence of syphilis in Latvia since 1920 one can hardly explain its intermittent character. Morbidity was very high in 1922 (310 cases per 100,000

persons), then again in 1973 (82.6 cases per 100,000 persons) and since 1993 a dramatic increase in the incidence of syphilis has been noted again (Table 1).

In 1993, there were 830 recorded syphilis cases in Latvia, in 1994 the number of cases amounted to 1521,

in 1995 to 2357, in 1996 to 3124, in 1997 to 3008, in 1998 to 2597 (Table 2). Over the period of many years there were only 31 AIDS patients and 260 HIV positive subjects. Out of them 6 and 2 respectively have died.

Materials and methods

Epidemiologic, clinical and diagnostic data on cases of syphilis in Latvia have been summarized; syphilis was diagnosed clinically and confirmed by finding spirochetes or determining serologic tests for syphilis (STS).

Serological methods, used for diagnosis of syphilis in Latvia, are the following:

- rapid diagnostic methods – SED, RPR, VDRL;
- passive hemagglutination reaction – TPHA;
- immunofluorescence reactions – IFR abs, IFR abs IgM
- immunoferment (enzyme) analysis – IFA
- immobilization test for *Treponema pallidum* – Nelson test

Results

All results are seen in Tables 1 - 3. As seen in Tables 1 and 2, in 1994 there were 1521, and in 1997 3008 recorded syphilis cases in Latvia. Out of them in 1997, 621 were suffering from primary syphilis, 2362 from secondary syphilis, and the duration of illness was over 3 months in 1950 cases and over 6 months in at least 1353 cases. These data show that the population has not been sufficiently informed as to the high incidence of syphilis and do not visit a doctor.

Most alarming is the fact that the incidence of syphilis is increasing among young people (Table 2). In 1995 in the age group of 13 to 14 years and in the age group 15 to 17 years there were 15 and 156 cases respectively. 11 children acquired the disease from infected parents and 15 cases were congenital. In 1996 the figures were as follows: 10; 184; 7 and 25 respectively, while in 1997, 10; 138; 6 and 22.

Table 1. Dynamics of syphilis morbidity in Latvia (Nr. of cases per 100,000 of the population) and two biggest cities – Riga and Daugavpils*

	1993	1994	1995	1996	1997	1998
Latvia	23.7	59.3	91.9	124.9	121.3	105.6
Riga	34.1	94.6	147.4	183.8	167.4	127.2
Daugavpils	54.2	104.1	125.4	183.9	137.0	133.9

The number of cases with congenital syphilis is dramatically increasing in children of unemployed women, who are not registered with the obstetrician-gynecologist and see the physician for the first time at delivery or shortly before. According to the present regulations all pregnant women must register and serological analyses for syphilis are to be made during pregnancy, i.e., in the 2nd-3rd month as well as in the 6th-7th month of pregnancy. The distribution of syphilis patients according to their nationality was varied: 33.5 percent were Latvians, 55 percent were Russians, 11.5 of other nationalities reflecting the distribution of nationalities in Riga.

The recording and registration of syphilis cases in Latvia is carried out by the State centre for Sexually Transmitted and Skin Diseases. The monthly registered morbidity rates are reported to the State Environment and Health Centre that transmits the information on all infectious diseases to the State Statistics Committee.

In recent years, only one case of tertiary syphilis was diagnosed in Latvia (in 1995).

Discussion

It should be noted that a rapid rise in the incidence of syphilis in USA was observed in the early '90s, when 20 cases per 100,000 persons (1,2) were diagnosed. In Eastern European countries the incidence of syphilis in 1995 was the following: in Russia 177, in Moldavia 173, in Belarus 147, in Estonia 69,7, in Lithuania 93, and morbidity was dramatically increasing (4). In the United States this was connected with the high level of drug addiction - "crack" cocaine use (2). This refers partly to the situation in Latvia, as well as to the above countries where the prostitution level is very high.

In 1920, registration of syphilis cases began and the high incidence may be explained by the post-war period (World War I) and lack of medications.

The years of 1939-1945, were the time of World War II and registration of syphilis cases was not taking place.

Fluctuations in syphilis morbidity are parallel to changes in the economic and political situation, increased migration of peoples, expanded imports and dissemination of pornographic literature. Since 1993 the rise in syphilis morbidity has been due to prostitution, advertised but medically uncontrolled, and due to the rapid rise in the level of unemployment, alcohol abuse and drug addiction.

Pornographic and sex literature was brought to Latvia and has acquired a mass character lowering the moral and ethical level of the population, particularly that of teenagers. Advertising of prostitution is spread

Table 2. Syphilis in Latvia in 1993 - 1998. Nuber of cases.

Age	1993 total	1994 total	1995 total	1996 total	1997 total	1998 total
0-4	2 (1 congenital)	5 (2 congenital)	26 (15 congenital)	32 (25 congenital)	28 (22 congenital)	20 (15 congenital)
5-9	-	-	-	-	-	2
10-12	1	-	-	1	-	1
13-14	6	4	15	10	10	5
15-17	77	108	156	184	138	119
18-19	103	153	200	261	185	184
20-29	411	774	1104	1361	1256	1073
30-39	169	347	552	786	799	684
40-and more	61	130	304	499	572	509
Total	830	1521	2358	3124	3008	2597

ding. About 200 clubs offering services by prostitutes have sprung up in Latvia, though prostitution has not been legalized. All this contributes to the dramatic rise in the incidence of syphilis (3).

The above-mentioned facts have created a situation in which prostitutes have become medically uncontrollable.

Conclusions

In the last 5 years syphilis in Latvia has had a tendency to spread. In 1998, however, this process slowed

down. From 1993 to 1997 secondary syphilis was often diagnosed. Increasingly, younger persons are getting infected.

To reduce the morbidity and spread of venereal diseases the following measures are recommended:

1. Education activities - articles in the press, addressing people by radio and on TV;
2. Education at school explaining possibilities of getting infected, syphilis prevention and treatment, the necessity of using condoms;
3. Passing a law on prostitution and regular medical check-ups of prostitutes.

Table 3. Characterization of syphilis patients in Latvia, 1993-1998

Stage of syphilis	1993	1994	1995	1996	1997	1998
Syphilis primaria	212	395	613	729	621	416
Syphilis secundaria	614	1121	1724	2362	2362	2155
Syphilis congenita	-	2	15	25	22	15
Syphilis latens tarda	4	3	5	8	3	11
Syphilis tertiaris	-	-	1	-	-	-
Total	830	1521	2358	3124	3008	2597

REFERENCES

1. Goens JL, Janniger CK, Wolf KD. Dermatologic and Systemic Manifestations of Syphilis. *American Family Physician* 1994; 50 (5):1013-20.
2. Buntin DM, Rosen T, Leshner JL Jr, Plotnick KH, Brademas ME, Berger TG. Sexually transmitted diseases: bacterial infections. Committee on Sexually Transmitted Diseases of the American Academy of Dermatology. *J Amer Acad Dermatol* 1991; 25: 287-99.
3. Rubins S, Janiger CK, Schwartz RA. Congenital and Acquired Early Childhood Syphilis. *Cutis* 1995; 56:132-6.
4. Gromiko AI. Epidemiology of sexually transmitted diseases in Eastern European states. *Journal Sexually Transmitted diseases* 1996; 6: 22-5 (in Russia, Moscow ISSN 0136-0048).
5. Edwards S, Carne C. Oral sex and the transmission of non-viral STIs. *Journal Sexually Transmitted infections* 1998; 78 (2): 95-100.

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