

80th Anniversary of the Publication of *Endemic Syphilis in Bosnia: Survey by the School of Public Health in Zagreb*

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ABSTRACT Certain regions of Bosnia and Herzegovina were prominent European sites of endemic syphilis. In 1934 and 1935 the School of Public Health in Zagreb, later the Andrija Štampar School of Public Health, conducted two surveys on endemic syphilis in Bosnia and Herzegovina. The surveys were well-described in the monograph published in 1939 by the School, under the title *Endemic Syphilis in Bosnia: Survey by the School of Public Health in Zagreb* ("Endemski sifilis u Bosni anketa Škole narodnog zdravlja u Zagrebu"). This paper provides a description of the publication for the first time, presents the most important data from it, and explores its significance from the historical perspective.

KEY WORDS: history, endemic syphilis, Bosnia and Herzegovina

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The School of Public Health in Zagreb was founded in 1927 with support from the Rockefeller Foundation, by a group of outstanding public health workers led by Dr Andrija Stampar (1888-1958), a physician and expert in social and hygiene medicine (1). In 1934 and 1935, the school conducted two surveys on endemic syphilis in Bosnia and Herzegovina. The only reliable source on these efforts is a publication in the form of a monograph of 220 pages, published in 1939 in Zagreb by the School of Public Health under the title *Endemic Syphilis in Bosnia: Survey by the School of Public Health in Zagreb* (2). The publication is divided into 16 chapters written by various members of the expedition to Bosnia and Herzegovina. The monograph provides an accurate description of the 1934 survey, while the one from 1935 is only briefly addressed.

The first survey was conducted in 1934 by the following members: Prof. F. Kogoj and A. Vuletić as the venerologists, V. Franković as the serologist, Prof. R. Lopasic as the neurologist, Doc. B. Gusic as the otologist, Doc. B. Dragisic as the pediatrician, prim. V. Boic as the internist, Doc. A. Spanic as the ophthalmologist, Rybkin as the radiologist, and Dr. Plasaj as the venerologist for women, J. Rasuhin as a social medicine expert, Lj. Popovic as the publicist, and local experts Dr. L. Dojmi and Dr. D. Orlic, who joined the expedition as venerologists in the field. The main centers for the survey were the towns and villages Vitovlje, Mehorigi, Travnik, Opara, and G. Vakuf in Bosnia and Herzegovina. In total, 4000 people were examined over 20 days during the first survey, of which 3000 were adults and around 1000 were children (2).

The second survey was conducted in the region of Cazin and Bihac, also in Bosnia and Herzegovina, as they wanted to complement the material from the first survey with findings from another epidemic in Bosnia. The survey took place in 1935 with the participation of the following experts: Kogoj and Vuletic as venerologists and Lopasic as the neurologist. This short stay (7 days) was made possible by Dr. S. Sjelski, the director of the Health Center in Bihac, who preselected and prepared all the patients who were of interest for the survey, especially those with a neurological disease. A total of 8000 people, of whom 2000 were syphilitic, were examined (2) (Figure 1 and Figure 2).

Important findings arising from the surveys

The contributions by the people involved in the surveys of 1934 and 1935 have an important place in the history of endemic syphilis in Bosnia and Herzegovina, because certain facts were ascertained for the first time. The following findings were of importance:

1) A change in the hypothesis about the epidemiology of endemic syphilis in Bosnia and Herzegovina was established.

Ante Vuletic and Fran Kogoj proved that the epidemiology of endemic syphilis was essentially different from that of sporadic syphilis. In the case of endemic syphilis, the infection was caused, in most cases, by extra-genital and not genital contact. Therefore, the primary local seat was nearly without exception on the lips or in the oral cavity. In Vuletic and Kogoj's opinion, endemic syphilis could be acquired by direct transmission of the infection (from dishes, vessels, various objects, incisions, tattooing, circumcision, smoking, etc.) and indirect transmission (kissing,



Figure 1. Members of the survey from the School of Public Health in Zagreb; from the monograph *Endemic Syphilis in Bosnia* Survey of the School of Public Health in Zagreb (photograph taken by Zakarija)

sucking, and sexual intercourse). The most frequent mode of transmission of infection was eating with the same spoon and drinking from the same cup. They also found that endemic syphilis appeared and developed mostly in childhood and that it appeared to be a disease that was spread in a family (3,4).

2) The first rhinological observations regarding endemic syphilis,

Branimir Gusic was the first to perform rhinological examinations in the field on a large number of children and people suffering from endemic syphilis. He was able to give a precise and detailed description of the changes related to endemic syphilis in the upper respiratory tract, previously unknown and unexplored. Gusic discerned that endemic syphilis usually began in childhood as a small mucous patch, often on the interior of the mouth (a primary effect). This was because of the mode of transmission of the infection from a family member through the use of the same dishes when eating and drinking (5).

3) The first isolation of the strain of Bosnian Spirochetes of endemic syphilis.

Biological experiments with strains of endemic spirochete were carried out by Ante Vuletic. He was the first to isolate the strain of Bosnian spirochetes of endemic syphilis, and he ascertained experimentally that there was no difference between endemic and sporadic spirochetes (6).

4) A change in the hypothesis about the origins of endemic syphilis in Bosnia and Herzegovina.

Lovro Dojmi's finding in *Endemic Syphilis in Bosnia: Survey by the School of Public Health in Zagreb*

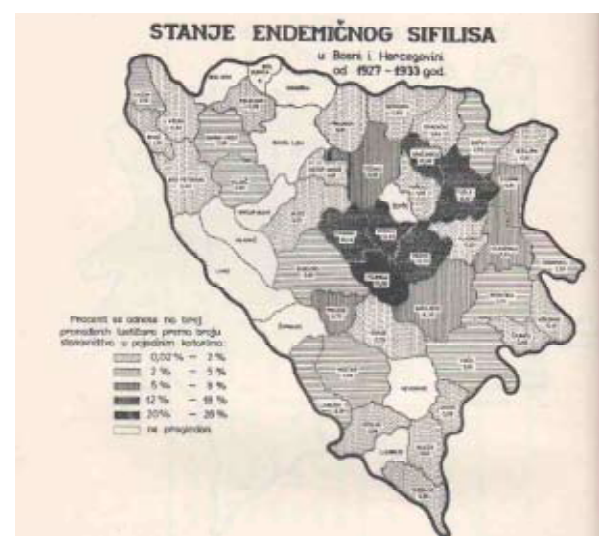


Figure 2. Map which shows the number of cases in Bosnia and Herzegovina in certain regions from 1927-1933; from the monograph *Endemic Syphilis in Bosnia* survey of the School of Public Health in Zagreb.

brought about a change in the hypothesis regarding the source and spread of endemic syphilis in Bosnia and Herzegovina. Dr. Lovro Dojmi was a local physician who had been the coordinator of the team that worked to combat syphilis in the Tuzla region since 1919 (7).

Dojmi expressed two hypotheses about the origins of endemic syphilis in Bosnia. One was that syphilis came from the East, from Turkey, and the other that it came both from the East and the West. The first hypothesis was promoted by Leopold Glück (1854-1907), a Polish physician, director of the hospital in Sarajevo, and the founder of the Centre for Treatment of Leprosy in Bosnia and Herzegovina. In 1888, Glück was the first to describe endemic syphilis in Bosnia. According to his theory, syphilis came from the East and was brought by the Turkish army to Bosnia and Herzegovina. Moreover, Glück was of the opinion that there was a difference between the epidemiology of endemic syphilis in Bosnia and the sporadic form (8). The same opinion, based on his own records, was held by Doctor Josip Flegler (1896-1966), the founder of the Dermatologic and Venereal Clinic in Sarajevo (9). Vuletić, as previously mentioned, disproved Glück's and Flegler's views on the epidemiology of endemic syphilis.

Dr. Lovro Dojmi disproved the theory of Dr. Glück and Dr. Flegler about the origins of endemic syphilis in Bosnia and Herzegovina. He stated that no one could deny that the spread of syphilis could have come from the Turkish army in Bosnia, however other western armies who came to Bosnia in the 17th century (the Venetian and Austrian armies) could also have instigated the spread of the disease (7).

Final eradication of endemic syphilis in Bosnia and Herzegovina

Endemic syphilis in Bosnia was finally eradicated thanks to a campaign conducted between 1948-1955 by the State Health Administration, the World Health Organization (WHO), and the United Nations Children's Fund (UNICEF) by Ernest Grin (1899-1976), the founder of venereology in Bosnia and Herzegovina) and Thorstein Guthe (Norwegian venerologist and Head of Venereal Diseases with WHO, 1912-1994).

In one of the articles by Guthe, the following statement can be found: "The Public Health Institute in Zagreb, in cooperation with the Rockefeller Foundation, investigated this problem through a field team of internationally recognized experts. It was shown that endemic syphilis only differed from ordinary sporadic syphilis in its mode of spread" (10).

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