

## STUDY REGARDING THE PREVALENCE OF *TREPONEMA PALLIDUM* INFECTION IN THE POPULATION OF BACĂU MUNICIPALITY

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### INTRODUCTION

Recent studies show that 86% of people with a sexually transmitted diseases (STDs) are between 15 and 25 years old. According to the same studies, there was a higher risk of female disease, especially in women who had more than one sexual partner. Even if no one is immune to a possible infection, there has been a greater predisposition among the poor, young people and people living in urban areas.

It should be noted that the presence of a sexually transmitted disease in the body does not eliminate the acquisition of another, just as the presence of a sexually transmitted disease in the past is not a guarantee of another reinfection. Sexually transmitted diseases have been and remain a current problem. The most common sexually transmitted diseases in Romanians are syphilis and gonorrhea, while in western countries the disease that is gaining momentum and eventually leads to sterility is chlamydia.

### MATERIALS AND METHODS

Following the bacteriological infestations performed during 2020 in the Medical Analysis Laboratory of the Bacău County Emergency Hospital, a few of 123 patients infected with *Treponema pallidum*, of both sexes, with different ages were identified.

For diagnosis, the working methods were as follows: dark field microscopy (highlighting microscopic treponemes for primary syphilis in exudative lesions or tissues), VDRL flocculation reaction for the screening stage, and TPHA reaction to confirm positive results.

### RESULTS AND DISCUSSIONS

Sexually transmitted diseases (STDs) are a global public health problem with ever-increasing incidence rates. Although the incidence of syphilis cases is continuously decreasing in the last 10 years, Romania is still one of the countries with the increased incidence of syphilis among the countries of the European Union. Illegal prostitution, lack of

sex education, drug use and homosexuality are some of the explanations for this situation.

The analysis of data on syphilis infection recorded by home (graph 1) shows a clear preponderance in urban areas (92 cases) compared to rural areas where 31 cases were recorded. The possible explanation of this situation would be the mobility of the population because of the urbanization phenomenon, the easier access to the medical service but also the obligation to perform the VDRL analysis at employment or periodically at work.

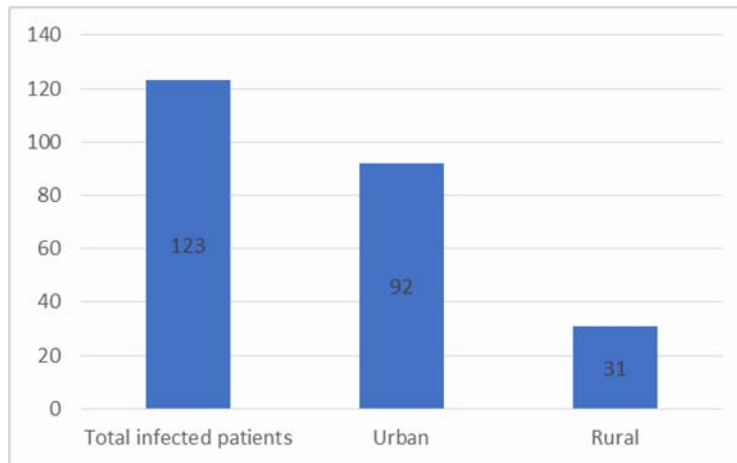
The situation of syphilis infection among the two sexes represented in graph 2 shows for 2020 a preponderance among women (75 women) over men (48 men). The visibly higher number among the female population can be explained mainly by the practice of commercial sex and the lack of sex education.

As an age range (graph 3) the highest number of cases was reported in the period 22-41 years, the sexually active period (22-27 years 20 cases, 28-34 years 24 cases and 35- 41 years 26 cases). Over this age the cases of syphilis decrease. It should be noted that a significant number of cases (16) are cases of congenital syphilis, transmitted from sick mothers.

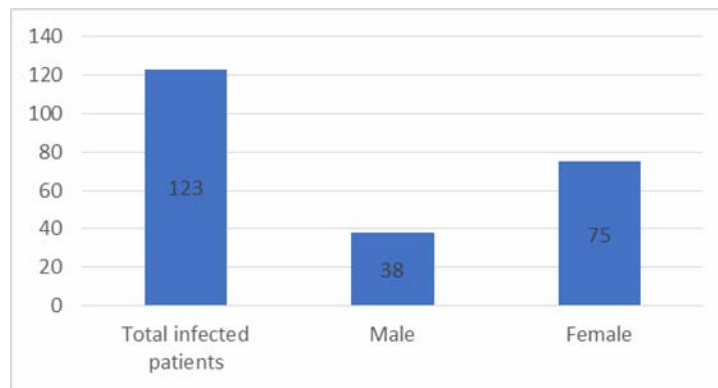
What is really worrying is the number of latent infected people (95 cases, graph 4), which shows poor addressability to specialist medical staff when the first symptoms of the disease appear, the causes being mainly ignorance. symptoms, especially the beginning of the disease but also the shame of presenting to the doctor, especially since the whole family or circle of friends must be investigated.

The distribution of syphilis cases by 2020 shows a slightly higher frequency in the summer months (June, July, August), but also January, February (graph 5), this aspect is not necessarily significant in terms of the incidence of syphilis cases.

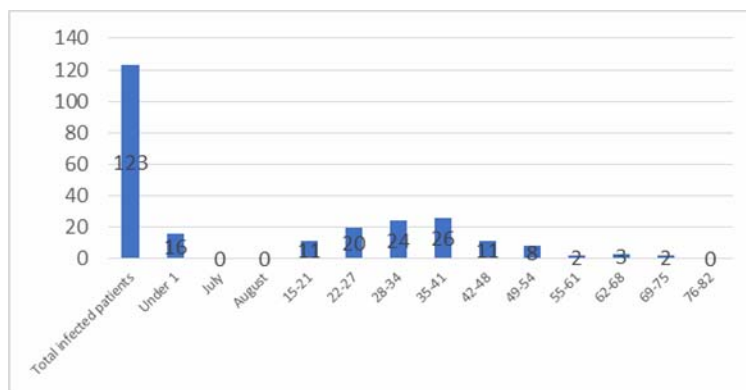
Any sexually active person is at risk for a sexually transmitted disease such as syphilis, regardless of gender, race, social class, or sexual orientation. Adolescents and young adults acquire sexually transmitted diseases much more easily than the elderly.



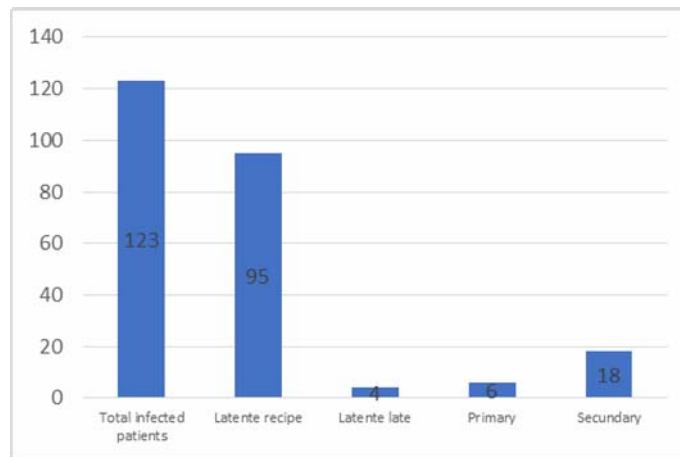
Graph 1. Percentage representation of patients infected with *Treponema pallidum* depending on the domicile



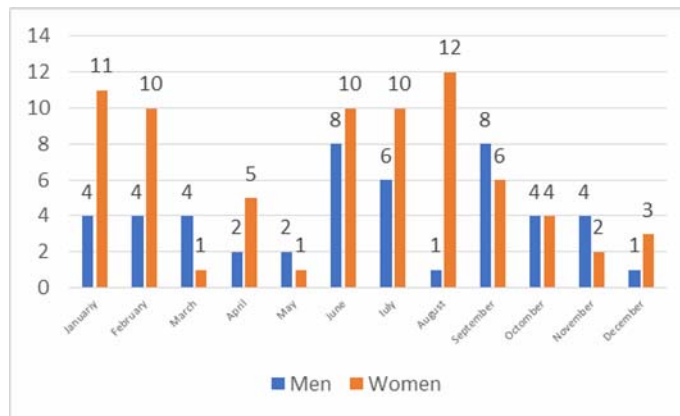
Graph 2. Percentage representation of patients infected with *Treponema pallidum* by sex



Graph 3. Percentage representation of patients infected with *Treponema pallidum* depending on age



Graph 4. Percentage representation of patients infected with *Treponema pallidum* depending on the stage of infection



Graph 5. Percentage representation of patients infected with *Treponema pallidum* in 2020

## CONCLUSIONS

- There is a high percentage of cases in the urban environment to the detriment of the rural one, the explanation being in urbanization and debauchery.
- Many numbers of infected females show poor education, many number of sexual partners, so the practice of commercial sex.
- In the case of men, although numerically fewer / 2020 registered in the laboratory of SJU Bacău, (probably more difficult to present to the doctor for investigation) the situation is generated, also, by practicing casual and unprotected sex, lack of sex education, drug use, homosexuality.
- There are a significant number (16) cases of congenital syphilis, transmitted from sick mothers.
- Many of recent latent syphilis show poor addressability to specialized medical staff when the first symptoms of the disease appear, either from ignorance or shame, syphilis being a

sexually transmitted disease that involves investigating the whole family, the circle of friends and contacts.

- Cases of syphilis are the prerogative of young people (second and third decade of age) and sexually active.
- The need to promote sexual behavior that ensures the protection and education of the population to use medical services.
- It is useful and necessary to carry out national programs of prophylaxis and information, of continuous institutionalized education about the prevention of sexually transmitted diseases and sexual life, especially in adolescents and young people. State health institutions must be supported to coordinate these programs at at least three levels: educational institutions, family, and family planning centers.

## ABSTRACT

During 2020, in the Medical Analysis laboratory of the Bacău County Emergency Hospital,

a few of 123 patients infected with *Treponema pallidum*, of both sexes, of different ages were identified. For diagnosis, the working methods were as follows: dark field microscopy for primary syphilis in exudative lesions or tissues, VDRL flocculation reaction for the screening stage and TPHA reaction to confirm positive results. The large number of infected people shows a poor education, many number of sexual partners, so the practice of commercial sex; there are a significant number (16) cases of congenital syphilis transmitted from sick mothers.

The recent high number of latent syphilis shows poor addressability to medical staff when the first symptoms of the disease appear, either due to their ignorance or shame, syphilis being a sexually transmitted disease that involves investigating the whole family, the circle of friends and of contact persons. Cases of syphilis are the prerogative of young people (second and third decade of age) and sexually active.

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