CHLAMYDIAL INFECTIONS IN THE ERA OF MODERN TECHNOLOGY - THE ROLE OF THE LABORATORY IN IMPROVING THE REPRODUCTIVE HEALTH OF YOUNG PEOPLE

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Background: Chlamydia is a sexually transmitted infection caused by the *Chlamydia trachomatis* bacterium. The infection is often asymptomatic, both in men and women. Urogenital infections can present as cervicitis, salpingitis, endometritis and pelvic inflammatory disease in women; as orchitis, epididymitis and prostatitis in men and as urethritis and proctitis in men and women. *Chlamydia trachomatis* infection can lead to tubal factor infertility, ectopic pregnancy and chronic pelvic pain Those infections can also be transmitted from mother to child during labour, leading to disease in the neonate.

Methods and Objectives: In the Department of Molecular Microbiology of Institute of Public Health of Serbia (IPHS), in first 6 month of 2024. were analysed 4161 samples by RT PCR method (Vector-best). Because of the great importance of this infection on reproductive health, the aim of this study is to examine the frequency of *C. trachomatis* infection in different age groups among patients from IPHS.

Results: In the first 6 months of 2024 a total of 385 laboratory-confirmed cases of *Chlamydia trachomatis* were registered in the Public Health Service of Serbia (PHSS) from IPHS and other labs in Serbia. During that period, at IPHS from 4161 samples, 63 (1,51%) samples were positive. The largest number of lab cases was in the age groups of 20-24 years (32), 25-29 years (7), 35-39 years (6) and 30-34 (5). Out of 63 positive results, the majority were women, 58 (92%), while there were only 5 (8%) men.

Conclusions: The high rate of reported chlamydia diagnoses among young adults indicates the need for further control. The strategy should include primary prevention interventions for at-risk populations, evidence-based case management, and effective surveillance activities. Offering young women (under 25 years) a chlamydia test can reduce their risk of developing pelvic inflammatory disease.

Keywords: *Chlamydia trachomatis*, RT PCR, STD, Reproductive Health