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■ CORRESPONDENCE ■

Impact of *Chlamydia trachomatis* and HPV Infection Among Sexually Active Teenage Girls in Upper Silesia, Poland

In their paper published in *J Korean Med Sci* entitled "Screening for Chlamydia and gonorrhea by strand displacement amplification in homeless adolescents attending youth shelters in Korea", Lee et al. demonstrated that the prevalence of *Chlamydia trachomatis* among homeless adolescents was 12.6% (1). They reported a higher rate (28.1%) of infection among sexually active adolescents than in a sexually inactive group. In our study, to recognize the global importance of sexually transmitted infections (STI) among teenage girls in Upper Silesia we investigated 48 non-pregnant, sexually active girls aged 16-19, living in an urban area, who paid a visit for periodical check-up during oral contraceptive use. The majority of the adolescents reported periodical mild pain in the lower abdominal area and an increased amount of mucous discharge. They also reported early first sexual unprotected intercourse (<16 yr of age) and more than three sexual partners. We used direct immunofluorescence assay for *C. trachomatis* antigen detection (Chlamydia Direct IF, bioMérieux, France) and obtained a high prevalence (27%) of *C. trachomatis* infection.

C. trachomatis infection is the most common bacterial STI, however, up to 70% of such infections are asymptomatic (2). The detection of asymptomatic infection has an important epidemiological implication, because the main consequences (infertility, ectopic pregnancy, pelvic inflammatory disease, and perinatal infections) of symptomatic and asymptomatic infections are often identical. In regions where an early screening program for detection of *C. trachomatis* infection has been established, the prevalence of infection in women is low: among Norwegian girls aged between 16-19 yr *C. trachomatis* infection was confirmed only in 9% (3).

Testing for *C. trachomatis* in teenage girls is not routinely performed in many countries (including Poland). Cook et al. (4) found that only one-third of physicians carries out *C. trachomatis* tests in asymptomatic, sexually active teenage women during a routine gynecologic examination.

In our previous study (5) of 205 sexually active women aged 17-40, we demonstrated a significant decrease of *C. trachomatis* infection among women younger than 25. British authors described 12.1% chlamydial infections in the age group of girls aged 16-19, 8.8% in the age group 20-24, and only 7.5% in the group younger than 16 (6).

It is well known that human papilloma virus (HPV) is a proliferative virus, replicating only in actively dividing cells. The coexistence of bacterial infection (including *C. trachomatis*) may potentiate the proliferation and replication (7, 8). Moreover, *C. trachomatis* infection may be a possible cofactor of HPV infection, playing a major role in the etiology of cervical intraepithelial neoplasia. For this reason in our study group of teenage girls we also detected HPV DNA in collected cervical brushes using the Hybrid Capture I HPV Assay (Digene Corp. Beltsville, MD, U.S.A.), with complimentary probes for low oncogenic (6/11/42/43/44) and high oncogenic types (16/18/31/33/35/45/51/52/56). The collected cervical swabs were also assessed using the 2001 Bethesda System. HPV DNA was detected only in 2 cases with a normal cytology. Low grade squamous intraepithelial lesions (LSIL) was described in 5 cases out of 48, all of which were HPV DNA-negative, however 4 were *C. trachomatis*-positive. The role of *C. trachomatis* in the development of cervical dysplasia is still controversial. Antilla et al. (9), and Koskela et al. (10) considered an independent role of *C. trachomatis* in pathogenesis of cervical intraepithelial dysplasia. Our results, obtained on a small group of girls in Upper Silesia, were concordant with the above conclusion, however, further studies on larger group of adolescent girls are required to confirm this hypothesis.

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