Cost-effectiveness of screening for Chlamydia trachomatis in adolescent females in Slovenia

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SUMMARY

The aim of the study was to evaluate the cost-effectiveness of screening at an estimated asymptomatic *Chlamydia trachomatis* prevalence of 6% in a cohort of 67,870 adolescent females by using the cost-effectiveness analysis (CEA). There were two screening strategies evaluated; screening by means of a direct immunofluorescence (DIF) assay and screening by means of a polymerase chain reaction (PCR). Both screening strategies have proved cost-effective when considering the current prices of DIF and PCR assays in Slovenia (population 2 million). Screening by means of DIF would generate a saving of 3.7 million US dollars, whereas with the PCR such saving would amount to 660,000 US dollars.

KEY WORDS

***Chlamydia trachomatis*, screening, cost-effectiveness, adolescent females**

Introduction

Chlamydia trachomatis exists as an intracellular parasite of cuboidal epithelium cells in human body only. It is known to cause trachoma, inclusion conjunctivitis, urinary and genital inflammatory diseases, lymphogranuloma venereum, neonatal pneumonia, arthritis, there is also a possible association with the development of cervical cancer (1,2).

In mastering and controlling sexually transmitted *C. trachomatis* infections, asymptomatic infections represent the greatest problem. In women, up to 70% of cervical infections and about 30% of pelvic inflammatory diseases develop asymptomatically (3). The most severe complications of chlamydial tubal inflammation are those of ectopic pregnancy and infertility (4).

As several sexually transmitted *C. trachomatis* infections develop with no evident signs of infection, it is essential that such infections are detected and treated in time, if we are to master them, and above all, their consequences. And this is precisely what screening for *C. trachomatis* infection is aimed at: to reduce the occurrence of the infection, as well as treat the infected persons and their sexual partners in time and thus prevent the sequelae of such infection (5).

Screening of both adult and adolescent females can be considered cost-effective not only at high but also at low prevalence of 3% to 6% (5, 6, 7, 8). The economic analyses of screening programmes are based on the evaluation of costs and results of procedures imple-