Infection with *Chlamydia trachomatis* in infertile women in Poland

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Introduction

Chlamydia trachomatis represents a causal factor of genital infections. Women with cervicitis can be asymptomatic or may complain of mucopurulent vaginal discharge or bleeding. Oedema, congestion and bleeding of the cervix have been observed. Urethral infection can be associated with cervicitis. A Chronic and relapsing infections with *C. trachomatis* may result in a disturbed function of oviducts and, probably, in a disturbed implantation of the ovum, resulting in infertility.

Objective

The studies aimed at evaluation of relationship between manifestation of asymptomatic infections with *Chlamydia trachomatis* and infertility of women in Poland.

Patients and Methods

The studies were conducted in 2010-2013 on 543 women in two groups. Group 1 included 190 patients, 23-39 years of age, in whom control tests were performed before planned pregnancy. Group 2 included 353 patients, 23-39 years of age, suffering from infertility (no pregnancy after 12 months of regular relationships). The studies included all reporting women with infertility with no grouping into infertility due to hormonal disturbances, anatomic reasons or male factors. From canal of uterine cervix a smear was taken and DNA of *C.trachomatis* was isolated using Swab (A&A Biotechnology) kit. DNA of *C.trachomatis* was identified using nested-PCR (DNA Gdańsk–Blirt) and amplifying *crp* gene. In the statistical analysis the Fisher's exact test was applied.

Results

On the basis of obtained results, infection with *C.trachomatis* was detected in 18 (9.47%) patients in the control group 1. In turn, infection with *C.trachomatis* was demonstrated in 81 (22.95%) patients with infertility (group 2). Obtained results between studied groups were significantly different ($p<0.0001$). The results are presented in figures (Fig 1-3).

Fig 1. Appearance of *C. trachomatis* in control group (group1) (%)

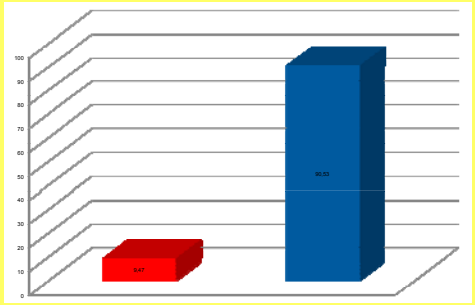


Fig 2. Appearance of *C. trachomatis* in infertilility woman (group 2) (%)

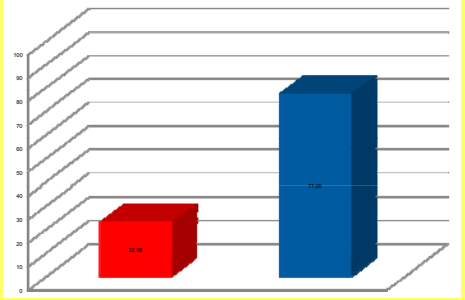
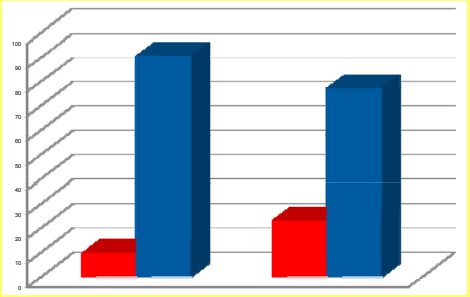


Fig 3. Appearance of *C. trachomatis* in group 1 and group 2 (%)



Conclusion

1. The studies indicate that chronic infection with *C.trachomatis* may represent a significant factor resulting in infertility of women.
2. In every couple with diagnosis of infertility and always before planned in vitro procedure tests for *C.trachomatis* presence should be performed.

References

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