POST-THERAPEUTIC EVOLUTION OF ANTI-CHLAMYDIA TRACHOMATIS ANTIBODIES LEVEL IN HUMAN SERUM AND SEMEN PLASMA AND ITS APPLIED SIGNIFICANCE FOR REPRODUCTIVE MEDICINE

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Introduction. Chlamydia trachomatis genital infection can cause such serious complication in women and men. The diagnosing of the infection is difficult because of its laboratory discrepancy. Antichlamydial immunoglobulins IgA are the more essential in diagnostic confirmation. In our recent research [1] we developed the results of German colleagues² concerning the diagnostic significance of the detecting of antichlamydial IgA in human seminal plasma. The role of IgA to Chlamydia trachomatis in human serum for diagnosing of genital chlamydial infection was established earlier [3, 4]. IgA to Chlamydia trachomatis in serum and seminal plasma are the markers of active infection. But because of antibodies are detected after antibiotic therapy during some period the practitioners can not exactly differentiate the already healthy men from still ill patients. The papers devoted to the post-therapeutic evolution of serum IgA are single but as to secretory anti-Chlamydia trachomatis antibodies in semen such publications are absent except for one announce-
ment that IgA can persist for a long time after treatment [5].

We have analyzed our original data to estimate the duration of antichlamydial IgA elimination out of blood and ejaculate after antibiotic therapy.

Materials and Methods. 129 people (80 men and 49 women) suffering from antibody-positive urogenital chlamidiasis were tested by enzyme immunoassay before, at once after treatment and through 2–8 weeks, 3–6 months, 6–9 months and more than 9 months after antibiotic therapy. IgA and IgG to Chlamydia trachomatis were tested in 70 patients. Only IgG were measured in 59 patients. In 30 men evolution of IgA was estimated only in serum, in 25 men both in blood and in seminal plasma. The changes of IgA and IgG
levels were estimated in general group, male and female groups distinctly, in female sub-
groups with and without pelvic inflammatory disease (PID). Control group consisted of
the 4 patients who refused antibiotic therapy and were tested repeatedly through some
months.

**Results and Discussion.** The elimination of antichlamydial IgA out of serum and se-
men plasma in comparison with control group developed after antibiotic therapy. Serum
IgA were eliminated completely through 6—9 months after successful treatment. It was
noted some sexual discrepancy. In women the elimination developed earlier than in men.
Through 3—6 months it amounted to 100% in women and to 92.3% in men (P = 0.05
by Wilcoxon test). The elimination of IgA out of semen plasma was more slow and
through 9 months after treatment had equaled 67—71%. It was supposed the latter was
not caused by especial duration of the elimination, but it depended on heterogeneity of
the group in which male patients had antichlamydial antibodies in semen plasma. Usu-
ally the elimination developed for the first 9 months after treatment but in single pa-
tients antichlamydial IgA in semen plasma persisted for more long period. Currently
there are no sufficient data to understand the immunopathogenesis of *Chlamydia trach-
omatis* infection in human semen. Just possible features of local (testicular) immuno-
pathogenesis can condition long post-therapeutical persistence of antichlamydial secre-
tory IgA in semen of some patients.

Serum IgG to *Chlamydia trachomatis* was detected in diagnostic titer during more than
one year after effective therapy.

**Acknowledgment.** The detection of antichlamydial serum and seminal IgA is important
in the diagnose of genital *Chlamydia trachomatis* infection. There exists phenomenon of
antibodies persistence after antibacterial treatment more expressed for seminal secretory
than circulating serum IgA. The testing for antichlamydial IgA in semen plasma must be
come integral measure of patient’s laboratory scanning in reproductive centers.

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