Photodynamic therapy at the treatment of virus-associated precancer and non-invasive cervical cancer.


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Materials and Methods: At P.A. Hertzen Moscow Research Oncological Institute photodynamic therapy of the uterine cervix was performed in two groups on sixty women aged 22-76, 2/3 of them were at reproductive age. Complex investigation was carried out using clinical, endoscopic, ultrasonic and morphological examinations, anti-viral activity of Russian photosensitizes. In first group of patients PDT was carried out using sensitizer Photosens (sulfonated aluminum phthalocyanine, the producer is FSUE “SSC “NIOPIK”, Moscow, Russia) three women with CIN II and twenty seven women with CIN III. In the second group of patients PDT was carried out using prosensitizer Alasens (5-aminolevunilic acid hydrochloride, the producer is FSUE “SSC “NIOPIK”, Moscow, Russia) thirty 30 women with CIN III after surgical amputation of the cervix. Consequently all women were tested for the presence of human papilloma virus (HPV) using polymerase-chain reaction (PCR). “High-risk” virus types (16, 18, 31, 33, 35, 58) were found in 90% patients. Genotypes 16/18 were found in 95% of cases.

Results: In the first group complete regression of CIN II and CIN III was achieved in 100% cases. In the second group complete regression of CIN III was achieved in 88.8%, significant regression – 7.4%, stabilization – 3.8%. At the group of women after surgical amputation of the cervix the assessment the effectiveness anti-viral activity of Alasens was made. The anti-viral effect of PDT in these groups was registered in 94.3% cases. The two women with CIN II and eleven women with CIN III became pregnant.

Conclusions: The received results of photodynamic therapy using Russian photosensitizes testify to further promising investigation and continuation of clinical tests in the given research. Photodynamic therapy is the method of choice of organ-sparing treatment especially for women planning labor. PDT method is rather radical as it preserves anatomical and functional integrity of the cervix. The interrelation between the achievement of complete regression of pathological changes of the uterine cervix and complete eradication of HPV is obvious. This work was supported by Moscow City Government.