Photodynamic therapy of malignant tumors of external location

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Introduction. The organ conservation treatment is a priority trend in modern oncology. Photodynamic therapy (PDT) makes possible the providing of radical treatment to patients having malignant tumors at the initial stage of the process by use of selective destruction of tumor and organ conservation treatment, with no complications and rare occurrence of collateral reactions. PDT does not cause complication of collateral pathology and allows treatment of patients with contra-indications to surgical, chemotherapeutical and radiotherapeutical treatment because of age and somatic status.

Materials and Methods. In the process of PDT, the destructive action goes as far as 4 to 6 mm deep. A method of non-invasive contact PDT has been developed by Oncologic Clinical Dispensary No. 1, which makes it possible to make the laser light penetrate 10 to 15 mm deep. A combination of remote and contact PDT expands the possibilities of the method. PDT method was used in the Dispensary to treat more than 1 400 patients suffering from different oncological pathologies. More than 70% received outpatient treatment. 49% of patients were older than 70 years. In 53% of cases, the patients were refused traditional treatment because of evident collateral pulmonary and cardiac pathologies, as well as the extension of the process. In their treatment, laser equipment and Photosense and Alasense photosensitizers of Russian make were used. Laser exposure was carried out in 1 to 10 sessions by remote or by contact method. PDT was applied to patients having malignant tumours of the following principal external locations: skin cancer, initial skin melanoma, metastatic lesions of skin due to melanoma, metastatic lesions of skin due to mammary gland cancer, Kaposi’s sarcoma, vulvar and vaginal cancer, cervical cancer, oral mucosa cancer.

Results. The efficiency of PDT applied to patients with skin cancer (T1-3,N0,M0) resulted in 85% of complete regression in the cases of basal and metatypical cell carcinoma, and 74% in the case of flat cell skin cancer. In the case of initial skin melanoma (T1-3,Nx,M0), advantage was taken of remote and contact laser radiation. Complete tumor regression occurred in 86% of cases. To patients with melanoma metastases to skin, PDT was applied because of insufficient efficiency of previous treatment (polychemotherapy and immunotherapy). As a result of treatment, the direct and complete therapeutic effect consisted in complete regression of metastatic tumors in 42% of cases. PDT applied to patients with metastases of mammary gland cancer to skin turned out to be efficient in 66% of cases. A combination of gamma therapy and PDT increases the efficiency of treatment of this category of patients up to 86 to 90%. The
efficiency of treatment in the case of patients with vulvar cancer (T0,Nx,M0, T1,Nx,M0, T2,Nx,M0) amounts to 80 to 93% of tumour complete regression cases. Treatment of patients suffering from dysplasia II – III and cervical cancer in situ is in the present time traditionally surgical. PDT makes it possible to apply the organ conservation treatment to outpatients in one session. Complete regression of the process occurs in 80 to 90% of cases. Irradication of human papilloma virus according to clinical research amounts to 94% of cases.

**Conclusions:** Photodynamic therapy is an effective and safe method of organ conservation method in the treatment of patients suffering from malignant tumors of external location, and a promising trend in practical oncology.

**As poster**