CASE REPORTS

PHOTODYNAMIC THERAPY FOR RECURRENT BASAL CELL SKIN CARCINOMA OF THE PARIETAL REGION AFTER RADIOTHERAPY

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Abstract

The results of the clinical observation of patient with recurrent basal cell skin carcinoma of the parietal region occurred in 4 years after radiation therapy are represented. The patient underwent photodynamic therapy (PDT) using photosensitizer fotoditazin at a dose of 1.0 mg/kg; the laser power density was 0.45 W/cm^2, the laser energy density – 300 J/cm^2. Tolerability of the treatment was satisfactory. One year after treatment there was a cosmetically satisfying soft normotrophic scar with no attachment to underlying tissues in the site of the treatment of basal cell carcinoma. According to cytological study tumor cells were not detected. For five-year follow-up there was no recurrence.

Keywords: basal cell carcinoma, photodynamic therapy, photosensitizer, fotoditazin.

For citations: Matveeva O.V. Photodynamic therapy for recurrent basal cell skin carcinoma of the parietal region after radiotherapy, *Biomedical Photonics,* 2016, T. 5, No. 2, pp. 38-40.

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To date, the basic trends in the development of photodynamic therapy (PDT) in various fields of medicine are determined [1]. The development of PDT is closely connected with the latest advances in science and medicine. For example, in recent years, the application of nanotechnology in the delivery of photosensitizers into the tumor to enhance the PDT effectiveness has been considered [2]. There are all the new domestic publications indicating a high efficacy and safety of PDT in the treatment of oncological and non-oncological diseases, including those of skin. In this area, the large experimental and clinical studies were conducted in recent years, which served as a basis for development of a number of PDT medical technologies. The high efficiency of PDT in the treatment of basal cell carcinoma, actinic keratosis, keratoacanthoma is shown [3-6]. It is known that in the case of recurrent malignant tumor of the skin its treatment complexity is increased greatly [3,6]. The repeated course of radiotherapy of such a pathology is impractical because of its inefficiency, and dangerous because of radiation damage. Today, PDT, in our opinion, is the only treatment for this pathology.

Here is a clinical observation of effective PDT for the basal cell skin cancer recurrence (condition after radiotherapy).

Patient G., 50 years old. Arrived with complaints of the skin tumor in the right parietal region. Four years ago, the radiotherapy of the surface basal cell skin cancer was carried out on the site with the total focal dose of 4000 Roentgen. About a year ago, the patient noted a pink spot near the scar, slowly increasing in size. She did not consult the doctor and was not treated.

The examination of the scalp in the parietal region showed a dense, flat, oval waxy plaque of 2.5x2.0 cm of the pinkish-orange color with clear boundaries and telangiectasias. The surface of the plaque on the front-left pole is covered with scales and crusts (Fig. a). The crust is torn away easily, exposing the bleeding erosive and ulcerative defect. The regional lymph nodes are not enlarged.

Clinical diagnosis: basal cell carcinoma on the right parietal region, recurrence after radiotherapy, rT2N0M0. Histological conclusion: basal cell carcinoma, solid type.

One PDT session with the intravenous administration of photodithazine as a photosensitizer (BETA-GRAND LLC, Russia, registration certificate No. LS 001246) 3 hours prior to irradiation at the dose of 1,0 mg/kg using LAMY laser device (662 nm) according to the polypositional procedure with the following parameters: field diameter – 1,5 cm, the number of fields – 3, laser power density (P/s) – 0,45 W/cm^2, energy density of the laser irradiation (E/s) – 300 J/cm^2.

The treatment tolerance was satisfactory. After treatment, the signs of hemorrhagic necrosis, congestion, and swelling of soft tissues were noted at the site of the focus.

A year later, there is a cosmetically satisfactory soft normotrophic scar, not soldered to the surrounding tissues, at the site of treatment (Fig. b). The cytological study no tumor cell.

Five years of follow-up showed no recurrence. The patient is subject to dynamic follow-up.

a b

Fig. The recurrent basal cell skin carcinoma in parietal region: a – before treatment; b – one year after treatment

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