CASE REPORTS

PHOTODYNAMIC THERAPY FOR A PATIENT WITH BASAL CELL SKIN CANCER OF THE LOWER EYELID (CLINICAL CASE)

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Abstract

The article provides an example of successful treatment of a patient with basal cell skin cancer of the lower eyelid of the right eye, stage IB cT2aN0M0, with the presence of concomitant pathology – a decrease in the activity of plasma factor XII of blood coagulation (Hageman disease). The patient's medical history is associated with long-term ineffective treatment of the tumor with Curaderm ointment. After diagnosis and further examination at the Moscow Research Institute named after. P.A. Herzen, at the Center for Laser and Photodynamic Diagnostics and Therapy of Tumors, the patient underwent organ-preserving treatment using photodynamic therapy. 1 course of photodynamic therapy with the photosensitizer chlorin e6 was carried out. Complete tumor regression was obtained; relapse-free follow-up period was 1 year.

Key words: basal cell skin cancer, photodynamic therapy, photosensitizer.

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ФОТОДИНАМИЧЕСКАЯ ТЕРАПИЯ БОЛЬНОЙ БАЗАЛЬНОКЛЕТОЧНЫМ РАКОМ КОЖИ НИЖНЕГО ВЕКА (КЛИНИЧЕСКОЕ НАБЛЮДЕНИЕ)

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Резюме

В статье приведен пример успешного лечения больной базальноклеточным раком кожи нижнего века правого глаза IБ стадии cT2aN0M0 с наличием сопутствующей патологии – снижение активности плазменного фактора XII свертывания крови (болезнь Хагемана). Анамнез заболевания пациентки связан с длительным неэффективным лечением опухоли мазью курадерм. После постановки диагноза и дообследования в МНИОИ им. П.А. Герцена, в Центре лазерной и фотодинамической диагностики и терапии опухолей пациентке проведено органосохраняющее лечение методом фотодинамической терапии. Проведен 1 курс фотодинамической терапии с фотосенсибилизатором хлорин е6. Получена полная регрессия опухоли, срок безрецидивного наблюдения – 1 год.

Ключевые слова: базальноклеточный рак кожи, фотодинамическая терапия, фотосенсибилизатор.

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Basal cell skin cancer (BCSC or basal cell carcinoma (BCC)) is one of the most common tumors in Russia. In the Russian Federation, the incidence of skin cancer ranks first (both sexes) among all malignant neoplasms. In men it ranks third after lung and prostate cancer. In women it is second only to breast cancer. According to statistical data, in 2022, the prevalence of malignant tumors of the skin (except melanoma) in the Russian

population was 298.9 per 100 thousand population, which is 18.47% higher than the level in 2012 (252.3). In Russia, 584,061 all cancers were registered in 2022, of which skin cancers (except melanoma) accounted for 79,124 patients. In 2022, skin cancers (except melanoma) were registered in stages I–II in 96.8% of cases, in stage III – in 2.3%, stage IV – in 0.6% [1].

According to the literature, BCC is most often localized on the skin of the head and neck [2]. According to a 27-year retrospective review of 5,755 cases of BCC, tumors were more common in high-risk areas (central face, eyebrows, nose, lips, chin, ear, temporal areas) and were greater than or equal to 6 mm in diameter, and tumors in moderate risk areas (cheeks, forehead, scalp, neck, jawline, lower leg) were greater than or equal to 10 mm in diameter. BCC in the head and neck region, including the "H zone" or "mask zone" of the face, has a higher risk and propensity for recurrence than those developing in the trunk and extremities [3].

According to the clinical recommendations of the Association of Oncologists of Russia, for the treatment of patients with BCC of the central zone of the face, it is recommended for all patients with an established diagnosis of low risk, where surgery and radiation for any reason are contraindicated or inappropriate, or the patient refuses due to dissatisfaction with the expected cosmetic results, or due to the general condition of the patient, etc., it is recommended to carry out any of the destructive treatment methods: curettage, electrocoagulation, cryodestruction, photodynamic therapy (PDT) or use topical agents with antitumor activity. All patients diagnosed with high-risk BCC are recommended to undergo tumor removal with intraoperative monitoring of all (peripheral and deep) resection margins during a pathological and anatomical examination of the surgical material [4].

Clinical recommendations of the NCCN regulate the use of curettage and electrodissection, surgery, radiation treatment, PDT, imiquimod, and cryotherapy for the treatment of patients with an established diagnosis of BCC of the central zone of the face at low risk in this localization. For patients diagnosed with high-risk BCC, surgical treatment is recommended; for inoperable patients, radiation therapy is recommended [5].

In recent decades, significant clinical material has been accumulated indicating the effectiveness of PDT regardless of tumor location [6].

Clinical case

We present a clinical observation. Patient A., born in 1983, in 2015 noted the appearance of a formation in the form of a pimple in the skin of the lower eyelid of the right eye. In 2016, the patient went to the skin and venereal disease clinic at the place of residence, where a cytological examination of scrapings from the formation was performed and BCC was verified. The patient was sent to the oncology clinic at the place of residence. Radiation treatment was offered, which the patient refused.

Next, the patient contacted the Federal State Budgetary Institution "National Medical Research Center of Oncology named after. N.N. Blokhin" of the Russian Ministry of Health, where therapy with Curaderm ointment was prescribed and lasted more than a year. During treatment, the tumor continued to grow. In June 2022, the patient contacted the Federal State Autonomous Educational Institution of Higher Education "First Moscow State Medical University named after. I.M. Sechenov" of the Ministry of Health of Russia, where a biopsy was performed on July 21, 2022 and the diagnosis of BCC was confirmed.

In August 2022, the patient independently contacted the P.A. Herzen Moscow Oncology Research Center, glass slides were reviewed, the diagnosis was confirmed (No. 22/1-01533 – BCC of glandular-cystic structure). Upon presentation, a tumor formation was detected on the skin of the lower eyelid of the right eye, spreading to the ciliary edge of the eyelid, with a maximum size of up to 1.7 cm in the form of an infiltrate with an exophytic component and cicatricial changes in the center.

According to ultrasound data of a tumor of the skin of the lower eyelid on the right and the lymph nodes of the neck: in the projection of the detected changes in the skin of the eyelid, a formation is visualized, rising above the surface of the skin, of a hypoechoic homogeneous structure, with smooth, clear contours, moderately vascularized, measuring about 5.5x2.5x4 mm, where 2.5 mm is the thickness, and the contour of the basal layer can be clearly traced – no obvious signs of invasion have been identified behind it.

The thickness of the skin outside the formation is about 1.2 mm. On the neck on both sides, including the submandibular, pre- and paratracheal, supraclavicular areas, along the main vascular bundles and along the posterolateral surfaces of the neck, pathologically changed and enlarged lymph nodes and additional pathological formations are not visualized. Final report: echography of skin formation of the lower eyelid on the right is without signs of invasion beyond the basal layer and without signs of atypical changes in the lymph nodes of the neck.

The clinical situation was discussed at an extended consultation, where the patient was recommended for surgical treatment, and was hospitalized in the microsurgical department. During the preoperative examination, deviations in the hemostatic system were revealed: aPTT was outside the measurement range, lupus anticoagulant was outside the measurement range.

Due to pronounced hypocoagulation according to laboratory tests, surgical intervention was not performed, the patient was sent for further examination in

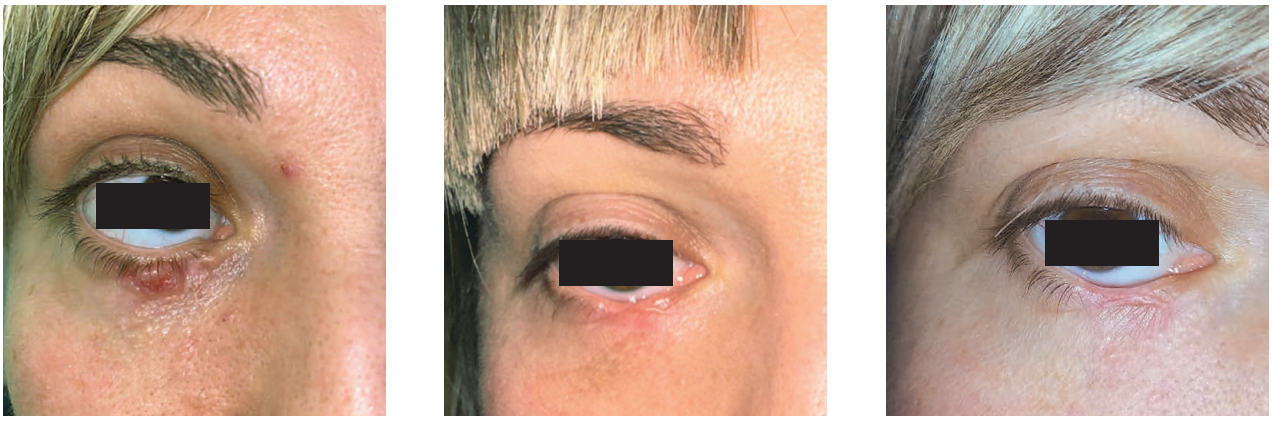

Рис. Фото нижнего века больной А.: a – опухоль до ФДТ; b – рубец в зоне опухоли через 6 мес после ФДТ; c – рубец в зоне опухоли через 1 год после ФДТ.
Fig. Photo of the lower eyelid of patient A.: a – tumor before PDT; b – scar in the tumor area 6 months after PDT; c – scar in the tumor area 1 year after PDT.

order to identify the genesis of the blood clotting disorder. The patient was consulted at the Federal State Budgetary Institution "National Medical Research Center for Hematology" of the Ministry of Health of Russia; additional examination revealed a decrease in the activity of plasma factor XII of blood coagulation (Hageman's disease), and a plan for a follow-up examination was drawn up for 12 weeks.

Patient at the P.A. Herzen Moscow Oncology Research Center was re-discussed at the council: taking into account the concomitant pathology of the hemostatic system (Hageman's disease, deficiency of the 12th clotting factor), which requires a lengthy clarifying examination, the localization and nature of tumor growth. The patient was recommended to undergo PDT.

On November 10, 2022 PDT course was completed (Fig.). The patient tolerated the treatment satisfactorily, there were no complications. The patient was observed for a year without relapse with a good cosmetic result.

This clinical observation demonstrates the effectiveness of the PDT method in the treatment of stage cT2aN0M0 BCC localized in the skin of the eyelids. Despite the presence of concomitant pathology associated with severe hypocoagulation and the spread of tumor infiltration to the ciliated edge of the eyelid, the treatment was carried out without complications; after PDT, not only complete tumor removal was obtained, but also a good cosmetic effect.

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