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Research Article

A MODERN APPROACH TO TREATING EARLY-STAGE SKIN CANCER IN THE HEAD AND NECK AREA

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ABSTRACT

Skin cancer is one of the most common cancers and is almost universally reported, although the incidence may vary considerably from region to region. Currently, oncologists note an upward trend in skin cancer with an average annual increase of 4.4%.

KEYWORDS

Skin cancer, head, neck, surgical removal.

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INTRODUCTION

According to WHO, more than 2 million cases of different varieties of malignant skin neoplasms are diagnosed in the world each year. In recent years, there has been a steady growth of morbidity of malignant neoplasms of the skin, which is associated with increased insolation, unfavorable environmental conditions in cities, increased incidence of endocrine and immune disorders and other factors. According to the International Agency for Research on Cancer, the global incidence of malignant tumours is projected to increase from 10 million per year at present to 15 million by 2021.

In Uzbekistan, skin cancer ranks second among malignant neoplasms.

Of all the morphological forms of malignant epithelial skin tumours, basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) are the most common, accounting for a total of more than 95% of all neoplasms. In 70-90% of cases, skin cancers occur on the face and scalp, which have a complex anatomical structure.

The leading method of treatment of patients with skin cancer is surgical removal of the tumour with one-stage reconstruction of the defect. However, this approach in patients with facial tumours is not always optimal and does not provide satisfactory results, and for this reason, other treatment options have been investigated in recent years.

Thus, taking into account the high prevalence of skin neoplasms, imperfect methods of diagnosis and treatment, further research of these issues is advisable.

OBJECTIVE OF THE STUDY

To improve the treatment of patients with skin cancer of the head and neck region

RESEARCH OBJECTIVES.

- To develop a method of skin cancer treatment in the head and neck region using BFRT with preliminary local hyperthermia;
- To conduct a comparative evaluation of efficacy after the course of HRTB;
- To study the recurrence rate after the combined treatment.

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METHODS AND METHODOLOGY OF THE STUDY

In the department of head and neck tumors of "Tashkent regional branch of the Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology oncology" 140 patients with skin cancer of head and neck region were examined and treated from 2018 to 2019. Of these, 66 were male (47.2%) and 74 were female (52.8%), ranging in age from 18 to 90. In all cases, the diagnosis was confirmed by morphological examination of the tumour, basal cell cancer (BC) was diagnosed in 53 (37.8%) patients, 70 (50%) patients were admitted with squamous cell cancer (SCC) and 17 (12.2%) patients diagnosed with skin melanoma (MC).

All patients on the outpatient stage were history taking, clinical examination, evaluation of the tumor extent according to examination and instrumental examination with determining the degree of involving of adjacent organs, anatomical head structures into the tumor process. If necessary, consultations with specialized specialists were carried out. Clear borders of the tumour were observed in 49 (35%) patients, in the remaining cases infiltrative growth with indistinct borders was observed. In 64 (45.7%) patients the tumour was located within the skin and subcutaneous fat, in 76 (54.3%) patients the tumour spread to various tissues below.

Surgical removal of skin cancer of the head and neck region with one-stage reconstruction of the defect was performed in 70 (50%) patients, and the combined method (BRT + surgical excision) was performed in 70 (50%) patients as well.

Comparative characterisation of treatments for scalp and neck cancer. In the main group, all patients underwent local hyperthermia followed by BFRT in the first stage. One month after radiotherapy the efficacy of the therapy was checked and surgical intervention was carried out afterwards. In the control group, only surgical excision was performed.

Combination treatment for scalp and neck cancer was applied by us in a selectively selected group. We had 70 patients with skin cancer under our study from 2018 to 2019, who received BFRT+hyperthermia in the first phase and surgical excision of the residual tumour in the second phase.

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According to clinical data, heating of malignant tumour cells immediately before radiotherapy activates cancer cells, which in turn increases their damage during subsequent irradiation, increasing the efficacy of the treatment. The procedure of local heating of tissues was performed 10-15 minutes before irradiation by the apparatus "FEN" and, as a rule, the heating temperature was brought to 40-45 degrees. The developed heating modes did not cause tissue edema, which ensured the possibility of repeated tissue heating before each session of irradiation and control the degree of tumour regression in the course of treatment. There were also observed changes in metabolic processes, disruption of cell membrane permeability, destruction of protein molecules and lipoprotein complexes, osmotic disorders, decreased production of antioxidants and a number of other effects occurring after local tissue heating. The result is a change in tumour cell metabolism and increased efficacy of radiation exposure.

Patients were then sent to the Department of "X-ray Diagnostics" of the TOFRSNPCiR, where they underwent BFRT. Clinical forms, tumour location and age of patients were taken into account when choosing the dose. The irradiation was performed on the RUM-7 apparatus, operating with unchangeable voltage of 50 kV, current strength of 5 to 10 mA, filtration of radiation through 2.5 mm aluminum and distance "source of radiation-skin" (RIK) - 7.5 cm.

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RESULTS OF THE STUDY AND DISCUSSION

When comparing the results of combined (in 70 patients) and surgical (in 70 patients) treatments the following was found. After application of BFRT with prior local hyperthermia (treatment group) of skin cancer, recurrence of the disease occurred in 4 of 70 patients (5,7%). And after surgical removal (control group) of a tumour recurred in 9 patients out of 70, that was 12,9%. The recurrent tumour was surgically removed in all cases and did not lead to complications.

There were no deaths from disease progression after both methods of treatment. The findings demonstrate the importance of proper treatment tactics for skin cancer patients. At inadequate treatment, unreasonable application of different

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treatments increases the probability of recurrence of the disease and worsens its prognosis. Consequently, in practical health care institutions for head and neck cancers, surgical removal of the tumour with prior BFR+hyperthermia and one-stage reconstruction of the defect after excision of the tumour should be performed.

Conclusions

Thus, the clinical application of the developed tactical approaches to the treatment of patients with head and neck skin cancer using the combined method made it possible to achieve optimal immediate, long-term, aesthetic and functional results, which ensured a full rehabilitation of patients after treatment. Analysis of the clinical material allowed us to identify prognostic factors and forms of neoplasms that require special approaches to treatment.

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