THE USA JOURNALS
THE AMERICAN JOURNAL OF MEDICAL SCIENCES AND PHARMACEUTICAL RESEARCH
(ISSN – 2689-1026)
VOLUME 06 ISSUE05

PUBLISHED DATE: - 26-05-2024
DOI: - https://doi.org/10.37547/TAJMSPR/Volume06Issue05-03 **PAGE NO.: - 10-14**

RESEARCH ARTICLE **Open Access**

WAYS TO IMPROVE THE EFFECTIVENESS OF CHEMOTHERAPY PATIENTS WITH LARYNGEAL CANCER, WITH MALIGNANT TUMORS OF THE NOSE AND PARANASAL SINUSES

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Abstract
At present, when planning complex treatment of patients with¬malignant tumors, an increasing role is given to chemotherapy. More than 50 antitumor chemotherapy drugs are used in clinical practice¬. This is due to the fact that neoplasms¬of different localization have different sensitivity to drugs. It was also found that they differ in their sensitivity to antitumor cytostatic agents in the same localization, prevalence, and histological structure¬. If the primary tumor focus in the head and neck area and metastases to regional lymph nodes, depending on the stage, can often be eliminated by radiation, surgical or combined treatment, then stable and long-term remission¬is ensured by the use of adjuvant chemotherapy.

Keywords complex¬treatment, complex treatment,¬underwent regional intra-arterial chemotherapy.

INTRODUCTION

Focusing in this paper on the possibilities of¬chemotherapy of the primary tumor focus as a component of complex¬treatment, it is necessary to emphasize that systemic polychemotherapy in some localities of malignant neoplasms of the head and neck is significantly inferior in effectiveness to regional intra-¬arterial chemotherapy. The advantages of the latter turned¬out to be minimal general toxic manifestations with a simultaneous more¬maximal antitumor effect, which is also not the same for the same localization and histological structure of the neoplasm¬. In some patients, there

is a pronounced regression of the tumor up to its resorption, while in others the therapeutic effect is not¬significant or absent at all.

In order to increase the effectiveness of regional intra¬-arterial chemotherapy, we used a new method developed by us in the experiment to determine¬the individual sensitivity of the tumor and lymphoid tissue to chemo¬preparations, based on the registration of the electron pair spectrum¬of magnetic resonance (EPR) and the level of free radicals in experimental (with chemotherapy drugs) and control (damaged control by hyperthermia at a temperature of 60 °C) samples

After testing in experiments on laboratory animals, the method of adequate regional chemotherapy was tested and implemented in oncological practice. We treated two groups of patients (30 people each) with malignant tumors of the nose and near¬the sinuses. All of them, as a stage of complex treatment,¬underwent regional intra-arterial chemotherapy with determination (group 1) and without determination (group 2)¬of individual sensitivity of the neoplasm to chemotherapy drugs. The age of the subjects ranged from 16 to 70 years.

Of the 30 patients in group 1, 12 were men and 18 were women. Epithelial-tumors were detected in 27 of them, non-epithelial-in 3. The¬primary tumor size in 1 patient corresponded to T2, in 22 — to T3, and in 7-to T4. Regional lymph nodes were not¬palpated. Most often, neoplasms were sensitive to cyclophosphamide, thioteph, benzoteph, 5-fluorouracil, methatrexate, and prospidine.

The use of adequate regional¬intra-arterial chemotherapy followed by radiation increased the survival rate to 5 years or more in 46.7% of patients. It should be noted that when the tumor regressed significantly, patients categorically refused to undergo surgery, or in inoperable cases¬, radiation was brought up to the full course dose. Transfacial rhinotomy was performed in 18 patients from this group at the final stage, of which a five-year follow-up period was observed in 12 (66.7%).

The individual sensitivity of the tumor to chemopreparations was not determined in group 2 patients, but¬the cytostatics to which the neoplasms in group 1 patients were most often sensitive were used during chemotherapy¬. In other words, the choice of chemopreparations, although it was made blindly empirically, but still their arsenal was very narrowed and concretized by previously¬conducted studies. There were 12 women and 18 men in this group¬. Epithelial tumors were also found in 27 patients, and¬non — epithelial tumors-in 3 patients. Neoplasm corresponding to T2 was found in 4, T3 — in 17, T4 — in 9 people. Metastases to regional lymph nodes (N1) were detected in 1 patient with T3 and 1 more with T4. In regional intra¬-arterial chemotherapy, cyclophosphamide, THIOTEPH, and benzoteph were used in the same doses and rhythm of administration. After regional intra¬-arterial chemotherapy followed by radiation, a 5-year period¬of swelling was observed in 33.3% of patients, and of the 17 people who¬underwent radical surgical¬intervention in the form of various rhinotomies at the final stage, this indicator was 52.9% at the same time, which is significantly lower than in the group of people with¬chronic rhinitis. preliminary adequate regional chemotherapy (66.7%).

Regional intra-arterial chemotherapy for cancer of the larynx, in addition to radiation exposure, was used in 87 men¬aged 37 to 77 years (83 with T3 and 4 with T4). In these patients, metastases¬to regional lymph nodes were absent.

Individual sensitivity of the neoplasm to cytostatic¬agents in this cohort of patients was assessed by recording intense blue fluorescence of tumor cells in biopsy tissue exposed to various chemopreparations. The optimal antitumor effect¬of the drug was judged by the maximum inhibition of luminescence.

The most effective drugs were sarcolysin, 5-fluorouracil, meta-trexate, thioteph, benzoteph, cyclophosphane, etc.

In 44 (group 1) out of 87 individuals, regional intra-arterial chemotherapy¬was performed after

individual determination¬of the sensitivity of tumor tissue to chemotherapy drugs, and in 43 (Group 2¬)-without it. Their drugs were selected by the "blind" method, but from the same "adequate" set as in patients of the 1st group. Of the 44 patients in group 1, the use of regional intra-arterial adequate chemotherapy followed by remote gamma therapy¬allowed achieving complete tumor regression in 25 (56.8%) patients. In group 2, as an adjunct to radiation therapy, it made it possible to preserve¬the larynx and all its functions only in 10 (32.5%) patients.

Analysis of failures in adequate regional intra-arterial¬chiotherapy with subsequent irradiation revealed a direct relationship between the effectiveness of treatment and the severity of vascularization of the pathological focus area. Intra-arterial administration of a 131L solution¬of albumin macroaggregate (131LMA) with subsequent¬scanning showed that with a more pronounced blood supply in the area¬of the tumor location, the effect of conservative treatment was much better than with weak and uneven vascularization of this area. In other words, with a better blood supply, more favorable conditions are created for the delivery of chemotherapy to the-affected area and subsequent radiation exposure.

Thus, the work performed by us for more than 20 years¬once again convincingly demonstrates the undoubted value of¬individual selection of cytostatics after determining the sensitivity¬of a neoplasm to them. Combining and combining adequate antitumor chemopreparations of different classes seems to be more likely to have a pronounced therapeutic effect than prescribing empirically selected multicomponent schemes of systemic polychemotherapy, which may quite naturally include useless or even harmful drugs with a¬pronounced immunosuppressive effect at the same time. It is also clear that¬the sensitivity of a tumor to chemopreparations can certainly change during its development, so it should be considered justified to repeat a biopsy of the neoplasm for a control determination of its sensitivity to chemopreparations, especially in cases where the development of resistance is noted. In recent years, there are more and more adherents to the use of adequate regional intra¬-arterial chemotherapy in cancer patients.

A. I. Gnatyshak and co-authors express doubts about the expediency of using cytostatics without taking into account the determination of¬individual sensitivity of the neoplasm to them. More¬categorically in this sense, A. M. Garin and co-authors believe that it is particularly important to overcome¬the natural and acquired resistance of tumor cells¬to cytostatic agents, as well as to determine the individual sensitivity¬of neoplasms to antitumor drugs, as¬a rational basis for improving the effectiveness of chemotherapy.

We do not in any way encourage an enthusiastic and illusory perception of the results we have obtained. We are deeply convinced that the widespread introduction into everyday practice¬of fast and automated methods for determining the individual sensitivity of tumors¬to cytostatic agents can make a significant contribution to the search for ways to improve the effectiveness of the treatment¬of cancer patients.

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