Practical experience in the application of local hyperthermia RCOD, Ufa

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"Give me the power to cause fever and I will cure all diseases."

Parmenides, Greek physician, approx. 500 BC

Our experience.
The Regional Clinical Oncology Center (Ufa) method of local hyperthermia (system CelsiusTCS) is used to treat cancer patients from October 2014, treated 118 patients.Sessions hyperthermia carried out within 3-4 hours after the radiation treatment. On average, 9 sessions were conducted (5-12) of local hyperthermia, appointed as a part of complex treatment. The age of patients ranged from 34 to 72 years. In assessing the overall radiation reaction and scheduling patients to sessions of hyperthermia we take into account the general condition of patients and their complaints, comorbidity, hemodynamics (blood pressure, pulse), body temperature, blood counts (contraindication for hyperthermia are leukopenia, thrombocytopenia, decreased INR and - a pacemaker).
Before each session of hyperthermia is the goal - to evaluate the acceptability of the combination of radiotherapy, chemotherapy and local hyperthermia in order to achieve anti-tumor effect.
The distribution of patients according to localization of tumor process were as follows.
Patients with cervical cancer St IIB-IIIB was 70% , 9% recurrence in the stump of endometrial cancer, 7% of breast cancer gr IV with metastases in bones and 1% in the caudate lobe of the liver, breast cancer St IIB - 5% and 3% St IIIB (T4N0M0, T3N1M0) after radical resection, the 5% with rectal cancer St II.
On the morphology of all tumors were categorized according to the international histological classification. In patients with cervical cancer was most commonly seen squamous carcinoma moderate degree of differentiation; breast – ductal and lobular carcinoma of the moderate degree of malignancy with metastases in regional lymph nodes; the body of the uterus is high and moderately differentiated adenocarcinoma of the endometrium, in some cases with invasion into the cervical canal, myometrium more than 1/3.
The effectiveness of the treatment was assessed by several criteria.
The degree of physical activity was carried out by 4 - point scale, in which 0 points were accepted, normal activity 1 score - matched light reduction, 2 points – consistent with moderately reduced

activity in these patients, bed rest was less than half of the daytime, 3 points – consistent with a strong reduction of physical activity, these patients spent in bed more than 50% of the duration of daytime, finally, 4 points - consistent with the extreme reduction in physical activity, patients have been forced to stay in bed during the day and night, according to our observations - 50 % of patients reported increased physical activity scores from 3/2 to 0.
To determine sleep quality surveys were conducted, each item of the questionnaire it was necessary to choose the most appropriate answer, which was evaluated from 1 to 5 points, 70 % of patients observed improvement in sleep quality from 15 to 24 points (less than 18 points – sleep is greatly disturbed, more 22 – sleep is not disturbed).
Reducing pain said 90 % of the patients (visual analog scale), hyperthermia allowed to decrease, and on occasion and to give up application of standard analgetics.
The improvement of General condition was observed in 80% of patients.
Also noted were adverse events in the form of amplification of the pain syndrome after the 1st session of hyperthermia, rapid heartbeat, headaches (history of vegetative-vascular dystonia on hypertonic type) - in 7 patients.
Our conclusions:
1. There was no breakthrough bleeding episodes in patients with locally advanced cervical cancer.
2. Erythema after the session of hyperthermia was not observed, before and after the session the skin is of normal color, clean.
3. Local hyperthermia lowers the pain threshold. It noted a significant decrease in pain and radiation reactions after the first sessions of hyperthermia.
4. When breast irradiation in conjunction with hyperthermia, there is a decrease in swelling and local radiation reactions, compared with women who received only radiation therapy.
5. The combination of hyperthermia and radiotherapy during radical treatment of patients is well tolerated, with no increase in the frequency and severity of typical radiation complications, so radiation therapy takes place without interruption.