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Local and systemic toxicity of isolated limb perfusion

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Background: To estimate the toxicity using isolated limb perfusion in RCRC RAMS.

Methods: Isolated regional perfusion, according to foreign research is an effective method in treatment of soft tissue sarcoma and in-transit metastases of melanoma of the limbs. There were 20 patients treated at the RCRC in 2010-2012. Women - 17 (85%), men - 3 (15%). Mean age $47 \pm 16,7$ years, range 21 to 79 years. Perfusion of the lower limb was performed in 18 patients, upper limb - in 2 patients. Melanoma - 14 cases (stage 3B, 3C, 4), soft tissue sarcoma - 6 cases. Control of leakage in overall blood circulation was performed by dynamic radiometry. Perfusion was performed at mild hyperthermia. Overall response to treatment was recorded in 17 (85%) patients, a complete response - in 5 (25%), partial response - in 12 (60%), stabilization - in 3 patients. Limb salvage in 20 patients. Leakage during perfusion did not exceed 6% (an average of 1-2%). Evaluation of local toxicity was conducted on a Wieberdink scale. At the first two levels indicated moderate hyperemia and edema. On the third level is growing lesion deep tissue structures. At the fifth level of toxicity performed amputation. Evaluation of systemic toxicity was conducted by NCI-CTC.

Results: In our study, there was no local toxicity above level 2 (moderate redness and swelling of the limbs). None of the patients had no severe systemic toxicity due to low leakage from the isolated limb into the systemic circulation.

Conclusion: There was no significant local or systemic side effects. Thus the high treatment efficiency (up to 85% of overall response) and the ability to save the limb can be achieved without complications.

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