

**PHOTODYNAMIC THERAPY IN THE TREATMENT OF CUTANEOUS HEMANGIOMAS****Mukhamedova Muslima Rustamovna,****Sadykov Rasul Rustamovich**

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**Abstract.** Hemangioma is one of the most common benign tumors in children with predominant skin lesions. Improving the results of hemangioma treatment using high-energy lasers and photodynamic therapy. The clinical material includes 86 patients with skin hemangioma, 45 of whom used the CO-2 laser destruction technique followed by photodynamic therapy using the photosensitizer methylene blue 0.05%. CO-2 laser destruction was performed in hypertrophic- mixed forms of hemangiomas to the skin level. The combined use of lasers with photosensitizers makes it possible to improve treatment results and achieve better cosmetic results.

**Keywords:** hemangioma; photodynamic therapy; CO-2 laser destruction; Optoscan laser; best cosmetic results.

Hemangioma is one of the most common benign tumors in children with predominant skin lesions. Unresolved problems of this disease remain the choice of the optimal treatment method in the early stages of hemangioma development, the completeness of recovery and the achievement of a good cosmetic result.

**The purpose of the research.** Improving the results of hemangioma treatment using high-energy lasers and photodynamic therapy.

**Material and methods.** The clinical material includes 86 patients with skin hemangioma, 45 of whom used the CO-2 laser destruction technique followed by photodynamic therapy using the photosensitizer methylene blue 0.05%. 41 patients with hemangiomas of the skin were treated with an Optoscan laser with radiation in the yellow spectrum? followed by photodynamic therapy using a drug containing hypericin in its composition. To assess the results of treatment, MRI, skin ultrasound, color Dopplerography, computer colorimetry, and digital imaging of hemangioma were used.

**Results.** CO-2 laser destruction was performed in hypertrophic- mixed forms of hemangiomas up to the skin level. Subsequently, a photosensitizer ointment was applied and irradiation was performed with a photodynamic therapy device with a power density of 100 MW/cm<sup>2</sup> with a radiation wavelength of 664-660nm. In the case of surface capillary forms of hemangiomas, an ointment form of photosensitizers was pre-applied with subsequent destruction of hemangiomas using an Optoscan laser with a wavelength of 580nm and an energy of 7-8J/cm<sup>2</sup>.

In hypertrophic forms of hemangiomas, which occurred in 35.4% of our patients, CO-2 laser destruction with photodynamic therapy is indicated when hemangiomas are localized in problem areas (shoulder, neck, chest). In closed areas of the body, as well as in non-problematic areas, 2-fold exposure to CO-2 laser without using photodynamic therapy is enough, which shortened the time and duration of treatment. In the case of residual flat capillary forms of hemangiomas, the use of a laser with a yellow radiation spectrum in combination with a photosensitizer containing hypericin is shown.

**Conclusions.** The combined use of lasers with photosensitizers makes it possible to improve treatment results and achieve better cosmetic results.

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