

**EXPERIENCE IN THE USE OF IR LASERS IN THE TREATMENT OF SKIN HEMANGIOMAS**

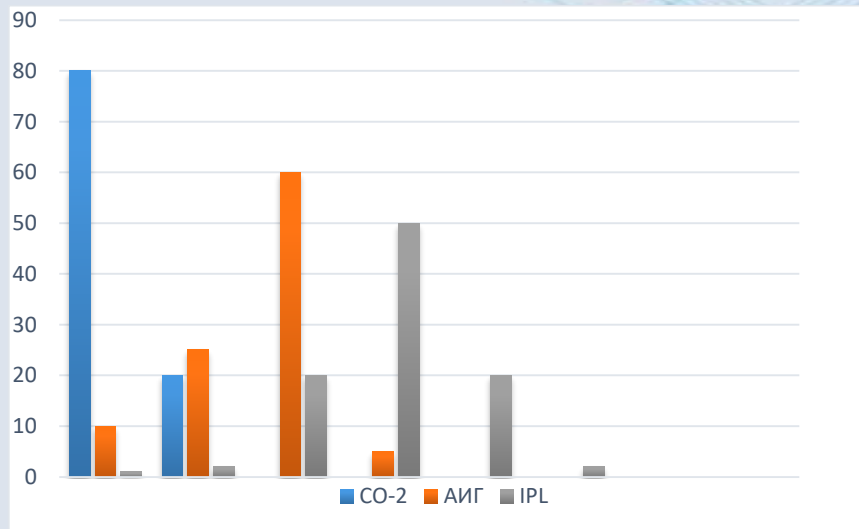
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**The purpose of the study is** to evaluate the effectiveness of treatment of skin hemangiomas using infrared emitters and lasers.

**Material and methods:** The results of treatment of 106 patients with skin hemangiomas were analyzed. The age of the patients varied greatly from a few months after birth to 21 years old. Hemangiomas were much more common in girls (69.44%) than in boys. The most frequent localization of hemangioma was in the facial region – 61.14%. In 11.1% of cases, hemangiomas were of a combined nature. The diagnosis of hemangiomas was established according to the international classification of hemangioma (ISSVA 2001). The results of treatment were evaluated by photo documentation of the macro-picture of the hemangioma, quantitative colorimetry, ultrasound of the skin.

**Results:** AIG-neodymium and CO-2 lasers were used to remove hypertrophic cavernous hemangiomas, and an IPL installation was used to remove capillary surface



**Figure 1. The number of treatment sessions using high-energy infrared radiation**

**Table 1**

**Results of treatment of hemangiomas with infrared lasers**

Survey data	CO-2 laser	AIG-neodymium	IPL
The scar	60%	80%	25%
Hyperpigmentation	40%	20%	38%
Skin atrophy	30%	17%	8%
Residual hemangioma	10%	15%	40%
Necrosis	7%	20%	5%
Infection	2%	8%	-

Complications included scarring of the skin (25-60%), scab appearance (100%), infection (2-8%), hyperpigmentation (20-40%). The complications that arose did not require a special treatment method or hospitalization. Hyperpigmentation was temporary and skin color returned to normal within 6 months-1 year.

The greatest skin changes developed after AIG laser exposure, the best cosmetic effect was achieved when using an IPL pulsed light-emitting installation, however, the latter is less effective in removing skin hemangiomas.

**Conclusions:**

1. Capillary flat hemangiomas of the skin occur both as a primary pathology and as a result of untreated residual forms.
2. High-energy infrared lasers are highly effective in the treatment of hemangiomas, however, they are accompanied by scarring of the skin of varying severity.

**Refereces**

1. Avelar-Freitas, B. A., Almeida, V. G., Pinto, M. C., Mourão, F. A., Massensini, A. R., Martins-Filho, O. A., Rocha-Vieira, E., & Brito-Melo, G. E. Trypan blue exclusion assay by flow cytometry // Brazilian journal of medical and biological research. 2014, 47(4). P. 307–315. doi.org/10.1590/1414-431X20143437
2. Tsibranska S, Ivanova A, Tcholakova S and Denkov N (2017) Self-Assembly of Escin Molecules at the Air-Water Interface as Studied by Molecular Dynamics. *Langmuir* 33:8330-8341.