

Effectiveness of Fotona SP Medical Lasers for the Treatment of Congenital Capillary Angiodysplasia of the Face

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Congenital capillary angiodysplasia of the face may significantly decrease quality of life. The effective treatment of this disease is a relevant problem in aesthetic medicine.

The aim of the study is to evaluate the effectiveness of treating patients with congenital capillary angiodysplasia of the face with a Fotona SP Dynamis medical laser system based on the Nd:YAG laser (1064 nm) using our own modified method.

Examination and treatment of 2 female patients (32 and 56 years old) with congenital capillary angiodysplasia of the face was performed. In order to get a more accurate understanding of the character of the defect, ultrasound (Toshiba SSA-660A) was used. Enlarged subcutaneous and intracutaneous vessels feeding the pathological area were not identified.

To eliminate the capillary angiodysplasia of the face, a Fotona SP Dynamis medical laser system based on the Nd:YAG laser (1064 nm) was used. Both patients had no contraindications for this type of treatment.

Methods of procedure and microthermolysis parameters: test mode (1st procedure) 60-80 J (Fl), 10 ms, 1.5 Hz, diameter 4.0 mm. Further, the energy was increased to 180 J (Fl). The multiplicity of procedures was 10. Thermolysis of the pathological zone was performed mosaically with the distance between the points of influence 1.0-2.0 mm.

The procedure was accompanied by air cooling of the skin using Cryo Zimmer 6 with a good analgesic effect.

After the procedure, patients were prescribed Dexapanthenol (2 times a day) for 10 days.

The evaluation of the results was performed immediately after the procedure (immediate results) and regularly in 1 month and 6 months (intermediate results). The final results were analysed 12 months after the first procedure.

Immediate results – all the patients showed darkening of the skin in the angiodysplasia zone during the procedure and immediately after it.

Intermediate results – in 1 month, the darkened areas of the skin acquired a pale pink colour; in 6 months, the affected area differed very little visually from healthy areas of the face. There were no scars on the skin.

Distant results: 12 months after laser exposure, the skin of the face in the area of capillary angiodysplasia of both patients was of normal colour and without aesthetic defects (without scars).

Using the Fotona SP Dynamis based on Nd:YAG laser (1064 nm) using the proposed parameters of 60-80 J (Fl), 10 ms, 1.5 Hz, 4.0 mm diameter, and a further increase in the energy effect to 180 J (Fl) had a persistent, positive therapeutic effect both in the short-term and long-term observation period.

Due to neodymium laser exposure, together with the elimination of the pathological process (capillary angiodysplasia of the face), there are signs of renewal of the vascular network of the dermis and activation of the cell pool which produces collagen, which leads to the restoration of the skin in the pathological area.

The proposed treatment method for patients with capillary angiodysplasia of the face using the Fotona SP Dynamis Nd:YAG (1064 nm) medical laser system is effective, safe and painless. It is necessary to continue to study the use of optimal exposure parameters for the treatment of this category of patients.

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