



MICROSECOND LASER FOR CHRONIC CENTRAL SEROUS CHORIORETINOPATHY. CASES SERIES

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Objective

Efficacy of the Norlase microsecond laser in the treatment of chronic central serous chorioretinopathy (chronic CSCR). Semiconductor laser (green) with wavelength of 520 nm in its microsecond mode, power of 400 mW, pulse duration of 200 ms, pulse in 100 ms intervals, spot size of 100. Performed on six patients as a treatment for chronic central serous chorioretinopathy.

MATERIAL AND METHOD

Seven eyes of six patients with chronic CSC were studied. Symptoms of at least 3 months, treated with microsecond laser. All of this is documented with optical coherence tomography (OCT), CIRRSUS 5000/5000 dense data cubes, tightly spaced B-scans, (either 30 or 47 μ m apart). With the analysis predetermined by the software to measure thicknesses.

The main variables studied were:

- Visual acuity with the LogMar scale before and after laser treatment.
- Macular thickness in microns measuring the thickness at the foveal level using OCT, before and after laser treatment.

All measurements were performed by the same examiner. In addition, demographic data of the patients were collected, as well as whether the affected eye was right or left (Table 1). Patients with macular diseases such as age-related macular degeneration and other differential diagnoses were excluded. The study was carried out with the approval of the hospital's ethics committee and all patients signed the consent authorizing the microsecond laser treatment under the figure of compassionate use. All laser sessions were performed on the Norlase equipment (LEAF green laser system; ultra-compact laser photocoagulator). Patients were reviewed one month after the laser.

Table 1. PATIENTS DATA

Patient	EYE	PRE VA	POST VA	PRE OCT	POST OCT
1	R	0.5	0	512um	260um
1	L	0.2	0	322um	272um
2	L	0.4	0.1	280um	198um
3	L	0.7	0.4	329um	138um
4	R	0.2	0	536um	238um
5	R	0.5	0.2	696um	214um
6	R	0.3	0.2	332um	212um

PRE VA: Visual acuity prior treatment; POST VA: Visual acuity post treatment; PRE-OCT: CMT prior treatment. POST-OCT: CMT post treatment

Table 2. VISUAL ACUTY LogMar

	Min	Máx	Media	DS	p-value *	Interpretation
Pre-VA	0.20	0.70	0.4	0.2	0.017	< 0.05, there is a stadistical difference between pre- and post-VA.
Pos-VA	0.00	0.40	0.1	0.2		

*Statidstical Test:
No Parametric test, Wilcoxon test

Table 3. Comparison of retinal thickness measured before and after the microsecond laser

	Min	Máx	Media	DS	p-value *	Interpretation
Pre-OCT	280.00	696.00	429.6	154.2	0.011	< 0.05, , there is a stadistical difference between pre- and post OCT
Post-OCT	138.00	272.00	222.6	45.0		

*Statidstical test:
Parametric test, T-Student

Conclusion

We can conclude that microsecond laser therapy could be useful in the treatment of relapsed and chronic CSC to accelerate the resolution of the disease, since we have observed in this series of cases a decrease in subretinal fluid and an objective improvement. As long as the time of evolution of the disease has not produced irreversible damage to the patient, photoreceptors and other retinal structures. However, we must take into account the limitations of this study, such as the small number of patients and the lack of a control group. To know if there is any real benefit from this therapeutic modality, randomized studies with a larger number of patients would need to be carried out in the future.

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