Application of yellow laser therapy and anti-VEGF CSCR in a group of young males, results

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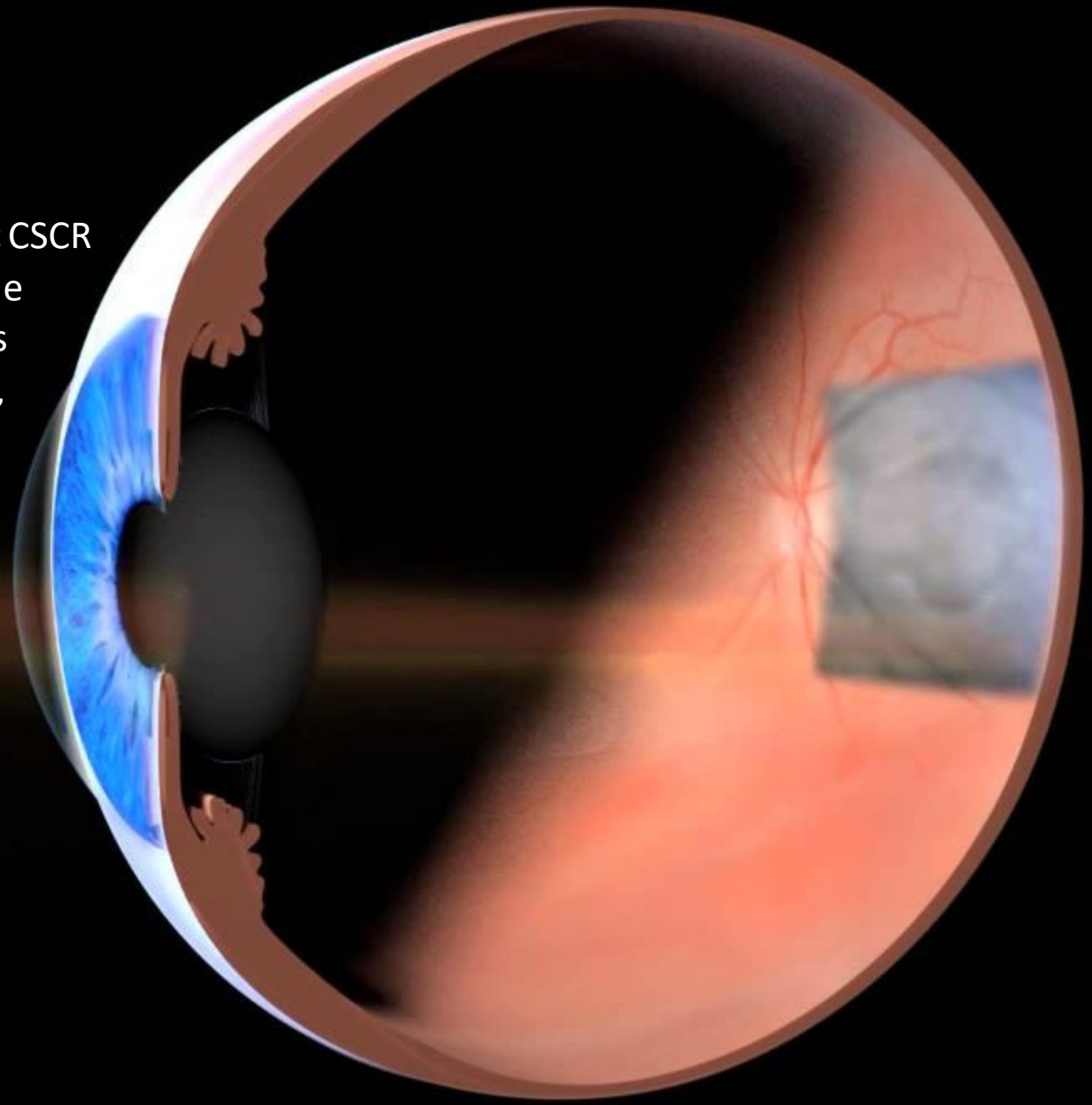
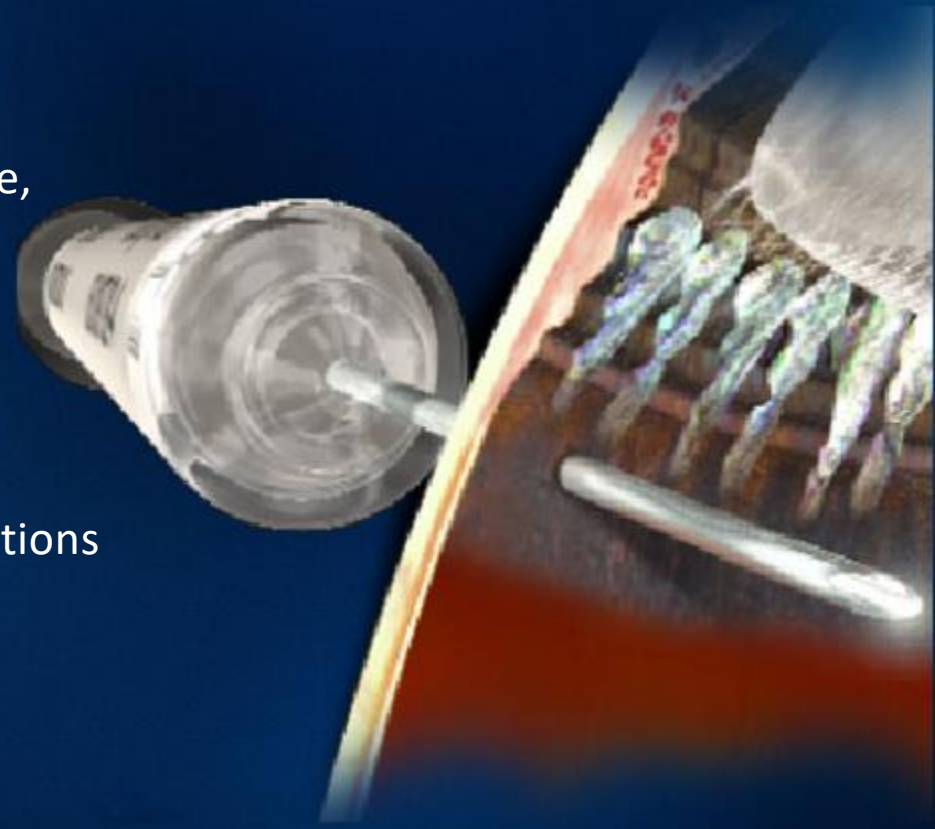
Attempts to treat acute and chronic CSCR with intravitreal bevacizumab are based on the hypothesis that choroida hyperpermeability is associated with increased expression of VEGF, albeit high VEGF levels were not detected in the aqueous humor. 95-98 Yet, Jung et al.

Have demonstrated that CSCR patients who responded to intravitreal bevacizumab had higher aqueous levels than those who did not respond.

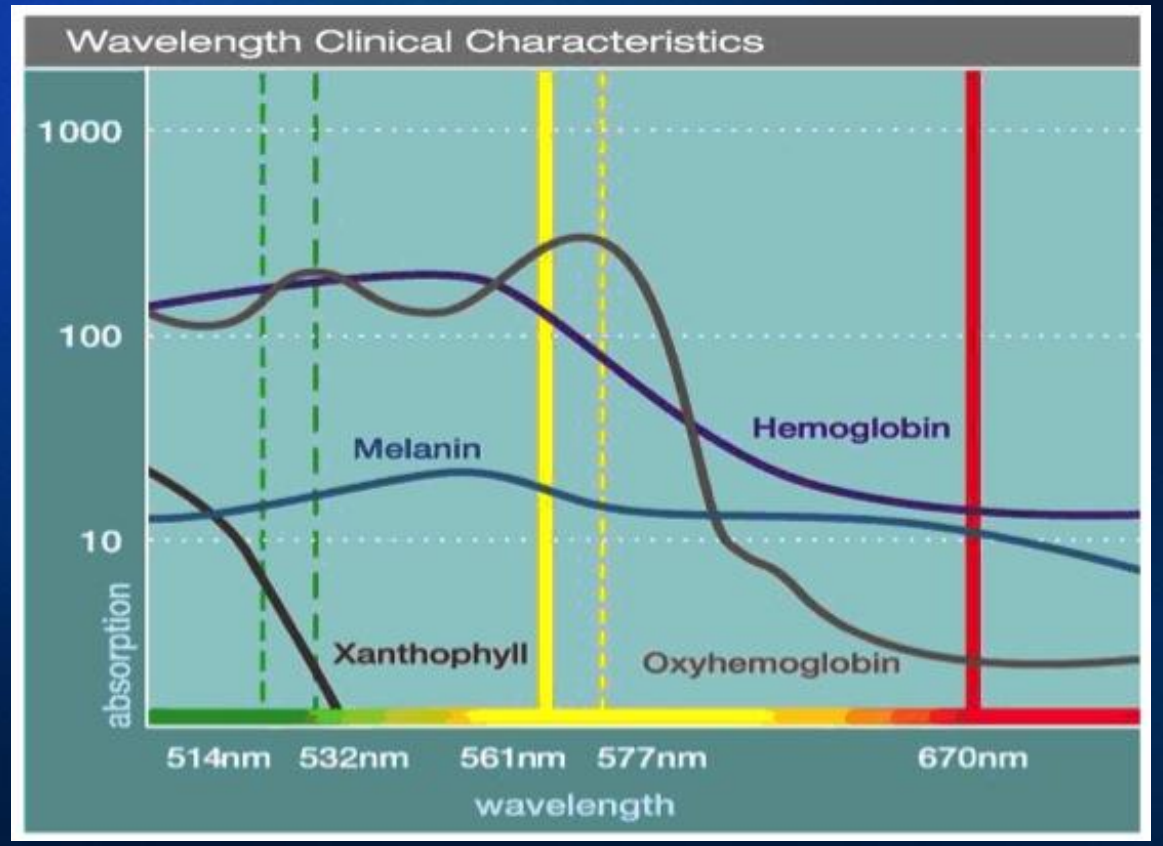


As the natural history of CSCR is generally favorable, the lack of controls in these case series, is noteworthy. On the other hand, anti-VEGF therapy has a much obvious, well-established role in CNVMs secondary to CSCR.

Use in treatment has found photo coagulation of a yellow laser beam in micro-pulses. Treatment therapy mentions the beneficial effect of photocoagulation on reducing fluid. Similar results occur after photodynamic therapy.



The 532 nm wavelength, in the most common retina laser, is best absorbed by hemoglobin and oxyhemoglobin, on average by melanin and to a small extent by xanthophylls.



First case - Stable and Long Term Results

45 years-old male

reduced BCVA on OS since Feb 2016

Eye exam on Apr 2016

VA OD 20/20. OS 20/80

Diagnosis CSR

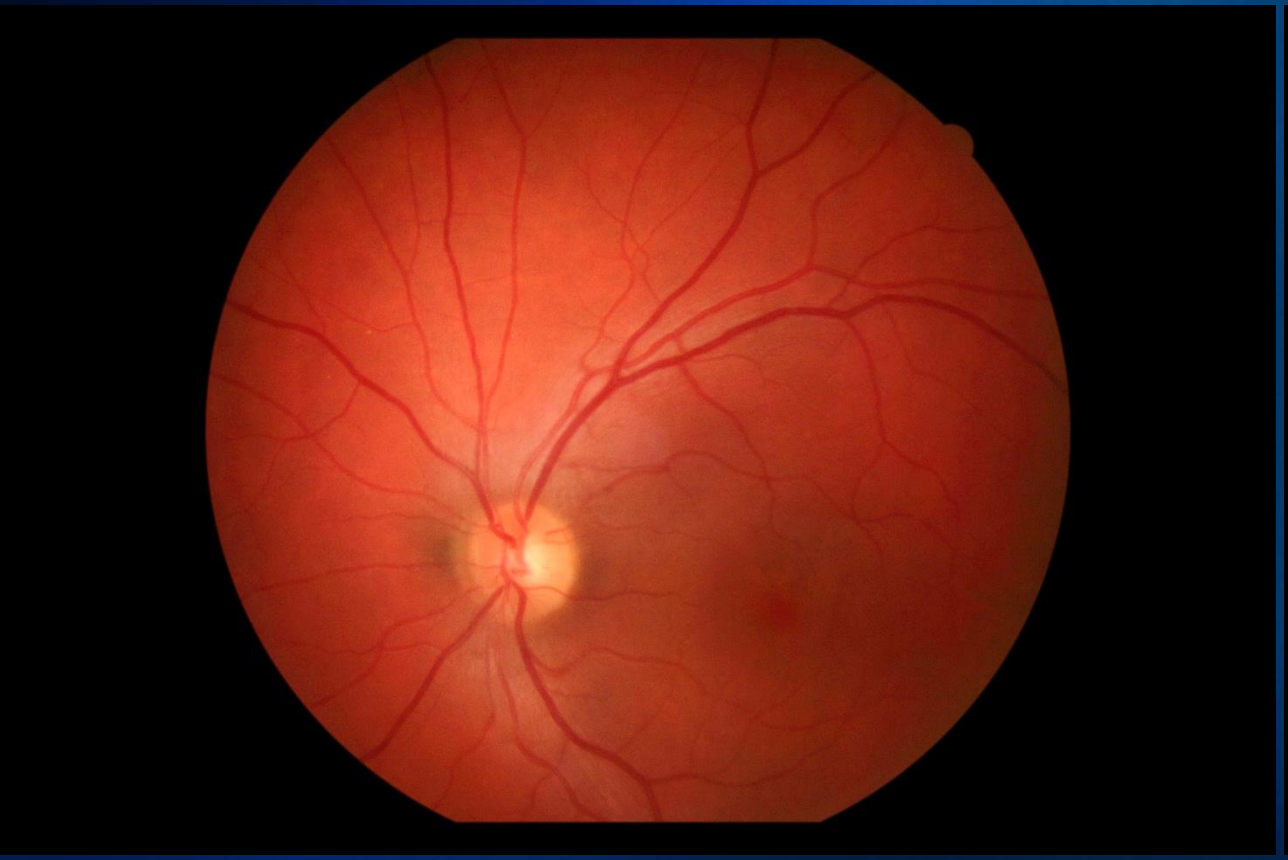
treatment laser photocoagulation

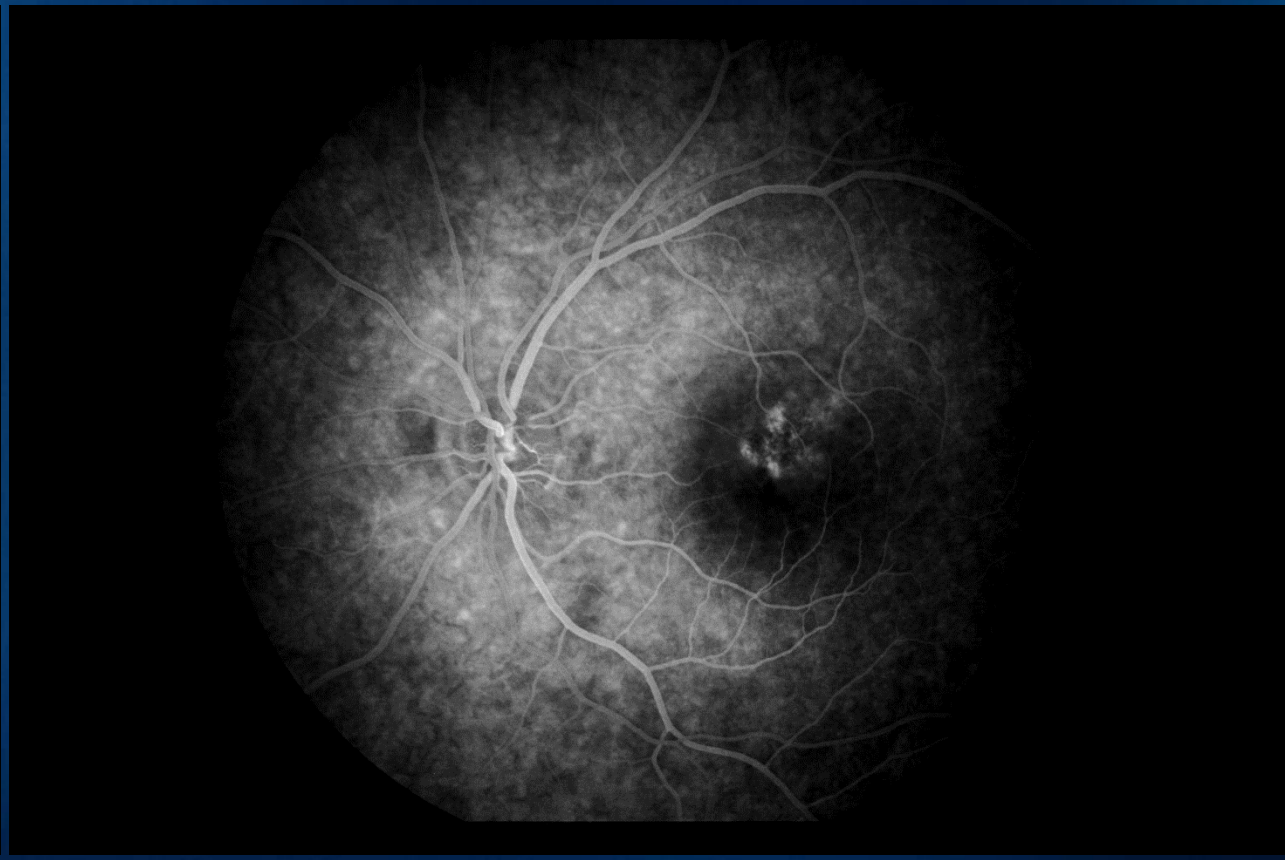
VA OS 20/40

treatment Bevacizumab 2,50 mg (Avastin)

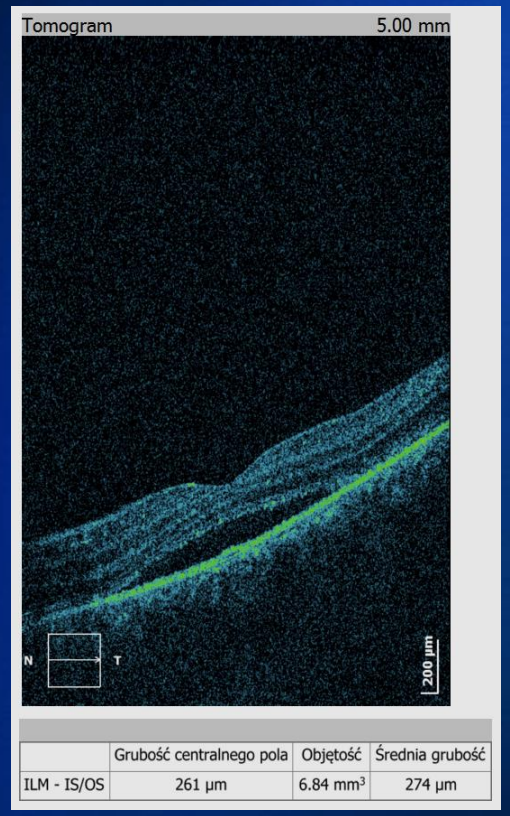
VA OS 20/40

OCT : no change



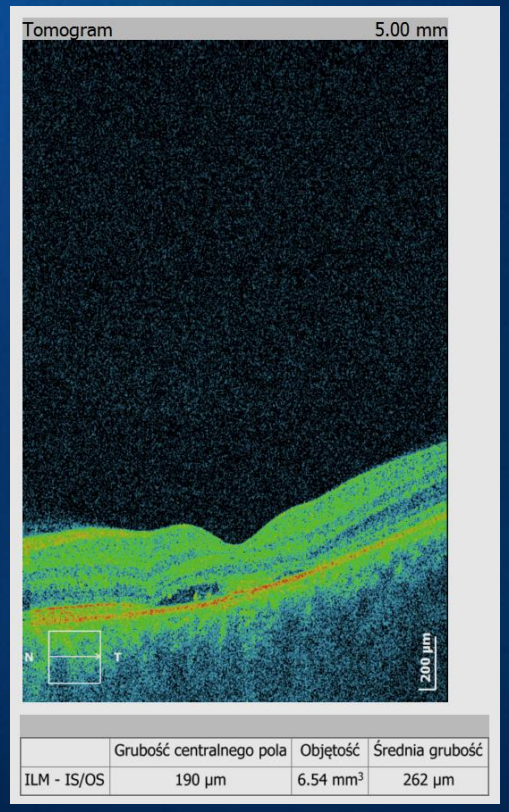


Treatment progression



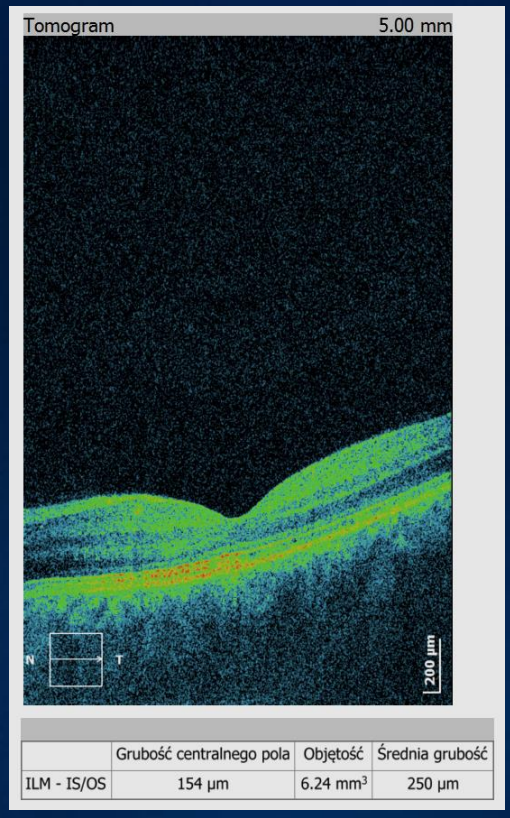
	Grubość centralnego pola	Objętość	Średnia grubość
ILM - IS/OS	261 µm	6.84 mm³	274 µm

without treatment



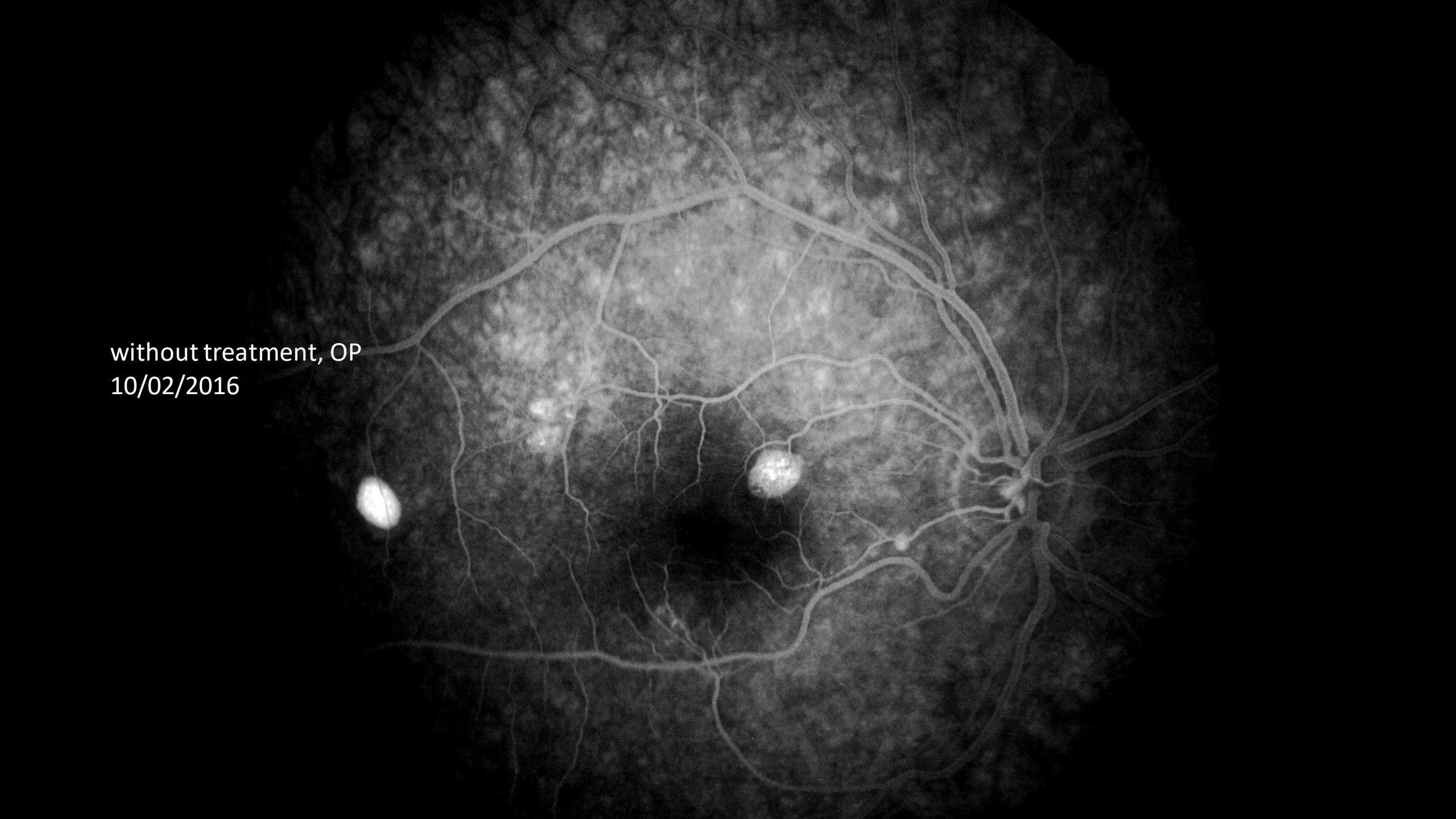
	Grubość centralnego pola	Objętość	Średnia grubość
ILM - IS/OS	190 µm	6.54 mm³	262 µm

after treatment Bevacizumab 2,50 mg (Avastin)



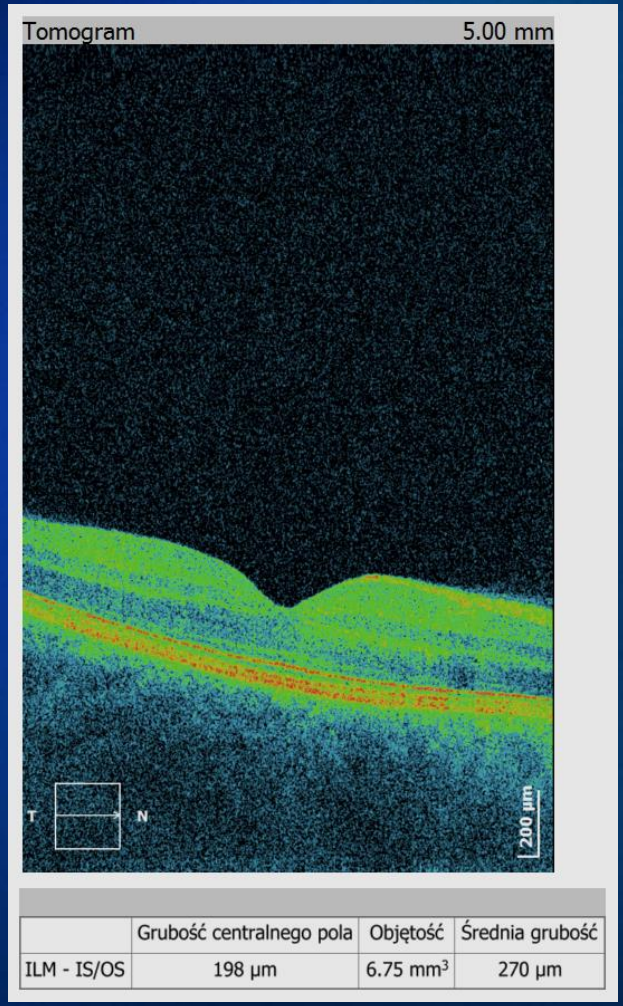
	Grubość centralnego pola	Objętość	Średnia grubość
ILM - IS/OS	154 µm	6.24 mm³	250 µm

after laser photocoagulation



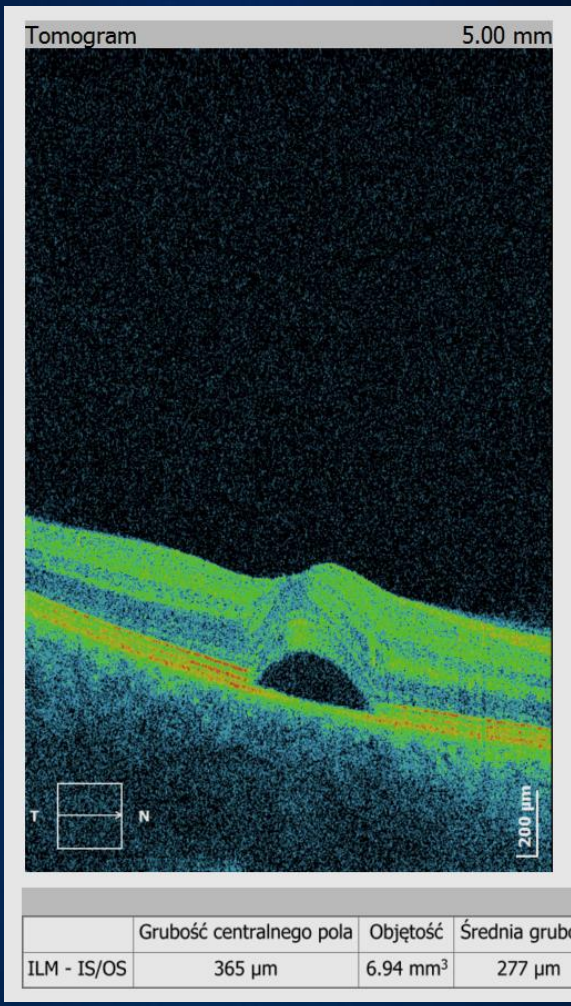
without treatment, OP
10/02/2016

the patient himself, right eye, without treatment. The date of the test 10/02/2016



	Grubość centralnego pola	Objętość	Średnia grubość
ILM - IS/OS	198 µm	6.75 mm³	270 µm

the patient himself, right eye, without treatment. The date of the test 16/01/2018



	Grubość centralnego pola	Objętość	Średnia grubość
ILM - IS/OS	365 µm	6.94 mm³	277 µm

Photocoagulation parameters:

Yellow Laser Micropulse Index 577

0,300 ms

15%

150 mW

470 shots on the detached retina
(aming RPE)

150 mikra

Second case - Stable and Long Term Results

47 years-old male

reduced BCVA on OS since Jan 2018

Eye exam on Apr 2018

VA OD 20/30. OS 20/70

Diagnosis CSR

treatment laser photocoagulation

VA OS 20/40

treatment Bevacizumab 2,50 mg (Avastin)

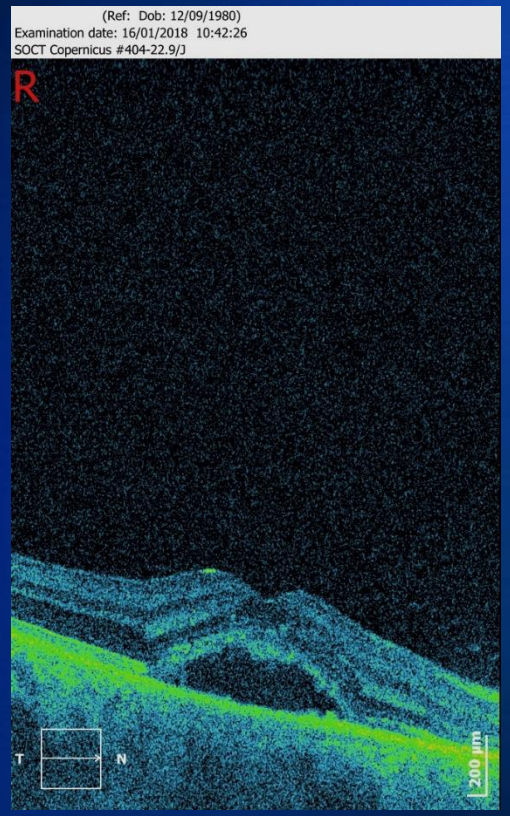
VA OS 20/40

OCT: no change

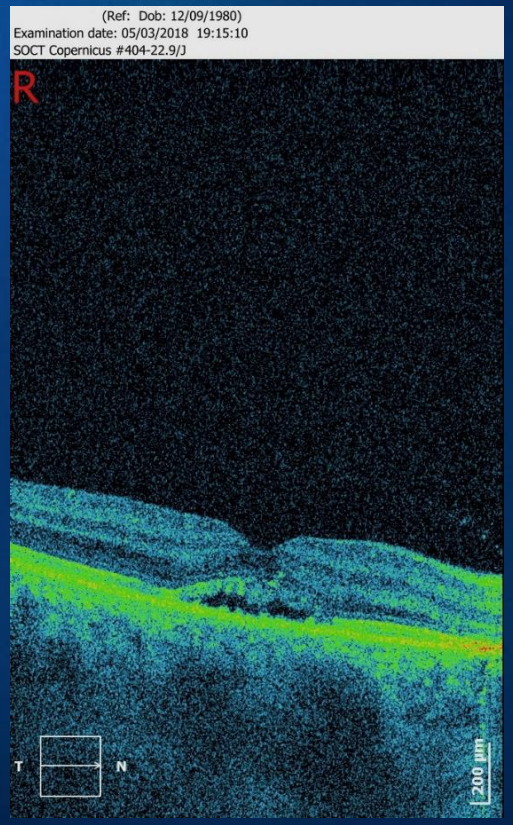
First visit of the patient- the fluid on the level was 320 jm.

After laserokoagulation at the leak point, power 180 jm

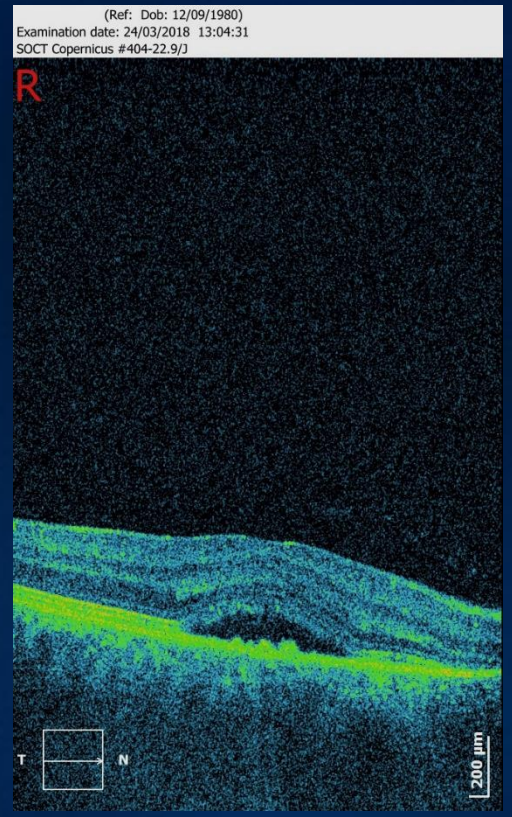
Treatment progression



without treatment



after laser photocoagulation



after treatment Bevacizumab 2,50 mg (Avastin)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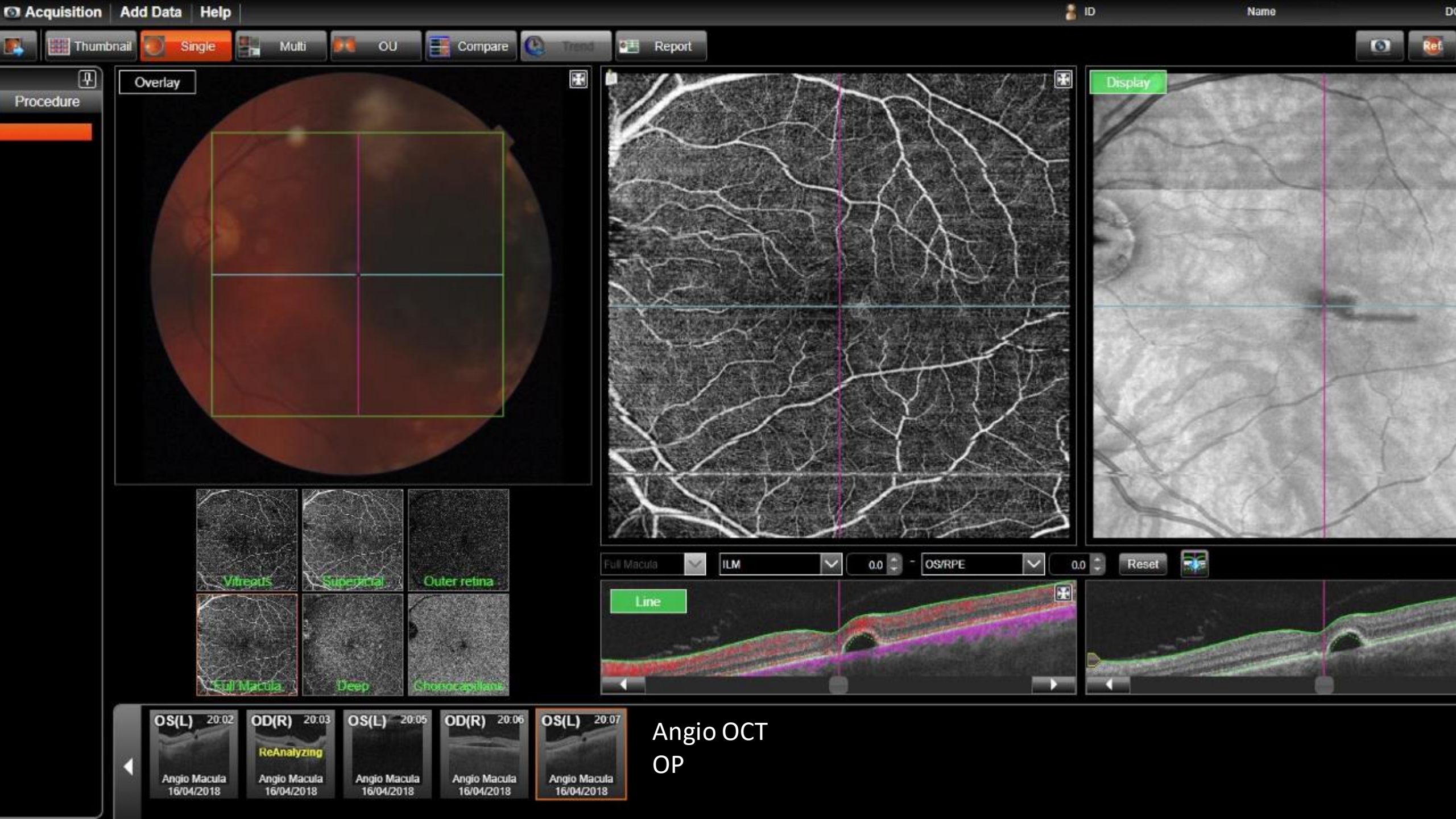
Angio Macula
16/04/2018

Angio OCT
OP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OS(L) 20:07
Angio Macula
16/04/2018

Angio OCT
OP

Photocoagulation parameters:

Yellow Laser Micropulse Index 577

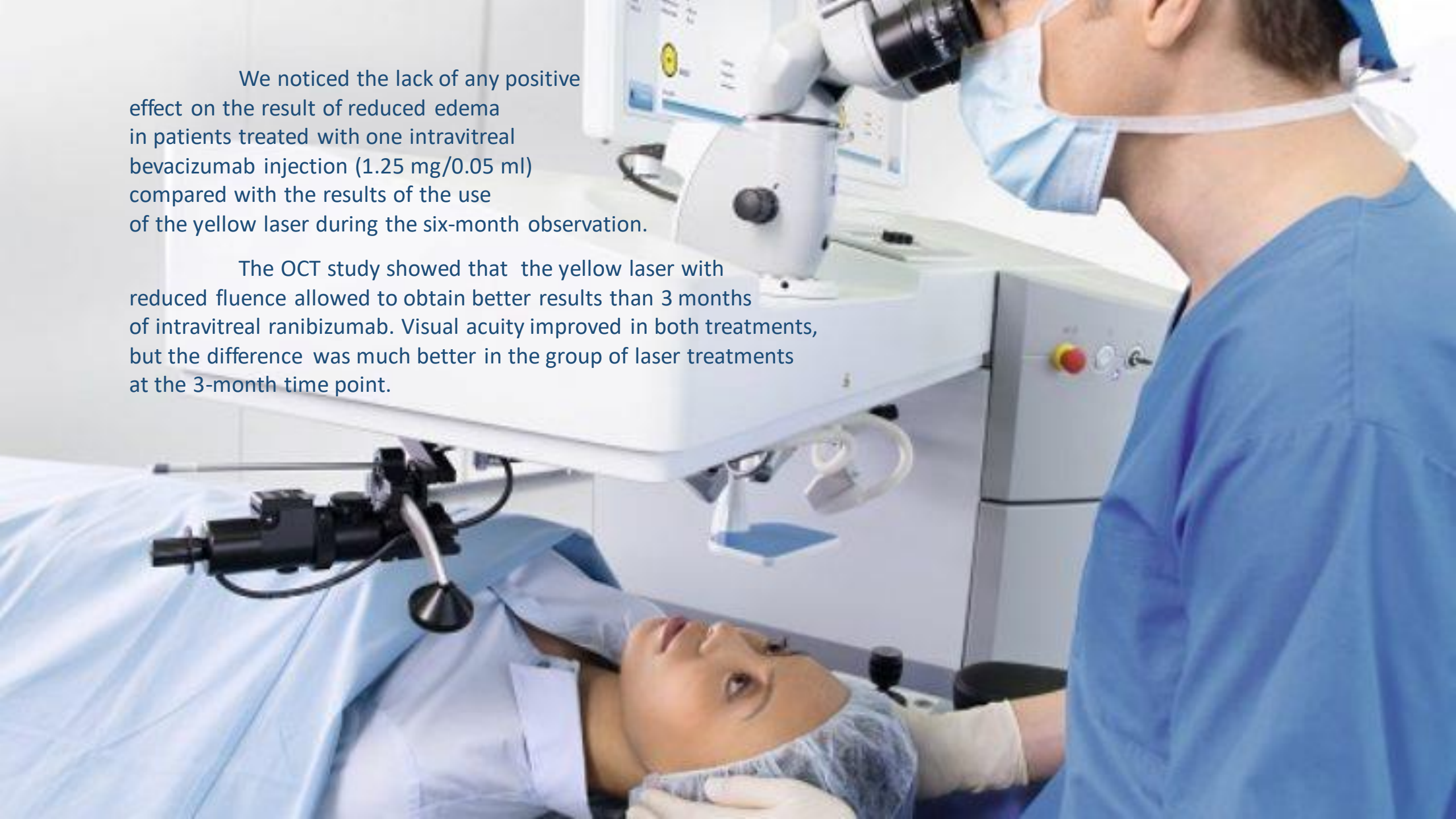
0,300 ms

15%

180 mW

420 shots on the detached retina
(aming RPE)

150 mikra



We noticed the lack of any positive effect on the result of reduced edema in patients treated with one intravitreal bevacizumab injection (1.25 mg/0.05 ml) compared with the results of the use of the yellow laser during the six-month observation.

The OCT study showed that the yellow laser with reduced fluence allowed to obtain better results than 3 months of intravitreal ranibizumab. Visual acuity improved in both treatments, but the difference was much better in the group of laser treatments at the 3-month time point.

Concluzions

There are several limitations to this study, including the small numer of patients and the retrospective nature of the study.

Further prospective, randomized, controlled trials are necessary to determine the efficacy of anti-VEGF and laserotchocoagulation treatment in the CSCR. In conclusion, we found a significant difference using the 577 Jm laser and observation regarding the results of the anatomical treatment in the CSCR. In terms of functional effects, the result of treatment after a forest coagulation was even better than using an injection.

Our studies show the effectiveness of laser yellow and injections and eye condition after surgery and eye where nothing was done

The algorithm should look like this: a yellow photocoagulation laser and a combination of injections. The basic question is: "To be or not to be?" The answer is "Look at the results"