
بسم الله الرحمن الرحيم

DIABETIC RETINOPATHY TREATMENT BY TRANS-SCLERAL SUBTHRESHOLD[MICROPULSE] DIODE LASER [TAHA TECHNIQUE]].

By

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Introduction

. THE RETINAL PIGMENTEPITHELIUM (RPE) PLAYS A SIGNIFICANT ROLE IN REPAIRING THE OUTER AND INNER BLOOD-RETINAL BARRIER REGRARDLESS OF THE TYPE AND LOCATION OF LASER APPLICATION

THE ABSENCE OF MICROPULSE CHORIORETINAL LASER DAMAGE PERMIT RE TREATMENT OF THE SAME AREA.

OUR AIM IS TO STUDY THE EFFECT OF DIABETIC RETINOPATHY TREATMENT BY TRANS-SCLERAL SUBTHRESHOLD MICROPULSE DIODE LASER, TAHA TECHNIQUE.

- This is a new technique {TAHA technique} for treatment of diabetic retinopathy and macular edema.
- We applied trans conjunctival and transscleral sub threshould diode laser by slit lamp 7 mm from limbus.
- We focus on the sclera and defocus posteriorly to the retina and choroid .
- Laser shots were applied to the periphery the retina up to the fornix

METHODS:

THIS STUDY INCLUDED 46 EYES OF 34 PATIENTS WHO HAD DIABETIC MACULAR EDEMA AND OR PROLIFERATIVE DIABETIC RETINOPATHY

.

METHODS:

PANTIES WERE DIVIDED INTO 2 GROUPS

GROUP 1 HAS MACULAR EDEMA

GROUP 2 HAS PROLIFERATIVE DIABETIC RETINOPAHY WITH VITREOUS HAEMORRHAGE.

TRANS- SCLERAL MICROPULSE DIODE LASER TREATMENT WAS GIVEN TO THE PERIPHERY OF THE RETINA.

LASER SITTINGS RANGED FROM 4 TO 12 IN THE FRIST GROUP AND FROM 3TO 14 SITTINGS IN THE SECOUND GROUP .

IN FOLLOW UP VISUAL ACUITY, OCT, COLORED FUNDUS PHOTO AND FLUORESCEIN ANGIOGRAPHY WERE DONE

RESULTS

: PATIENTS FOLLOW UP RANGED BETWEEN 3 MONTHS TO ONE YEAR.

As a results of subthreshold diode laser treatment, VISUAL ACUITY WERE IMPROVED IN 68% OF TREATED EYES IN group 1 , AND IN 84 % OF EYES IN GROUP 2.
STATICALLY SIGNIFICANT REDUCTION OF MACULAR EDEMA WERE IN 70 % OF EYES IN GROUP 1.
TOTAL DISAPEARANCE OF VITREOUS HAEMORRHAGE AND REDUCTIONA OF DIABETIC RETINOPATHY WERE OBSERVED IN 80 % OF EYES in G 2

. NO ADVERSE LASER EVENTS OCCURRED, NO LASER LESIONS WERE DETECTED CLINICALLY OR ANGIOGRAPHICALLY AFTER TREATMENT

.Protective effects from NIR [SUBTHRESHOLD 810 DIODE LASER photobiomodulatio] lasts as much as a month

NIR also protect photoreceptors, avoid cell death due to phototoxicity

It reduce death of photoreceptors by 70%

It inhibit cell degeneration of retinal ganglion cells

Transscleral Subthreshold Micropulse Diode Laser For Treatment of Retinopathy

{TAHA TECHNIQUE}

This Study is Indexed in

Quantitative Biology > Tissues and Organs

Transscleral Micropulse Diode Laser for Treatment of Diabetic Retinopathy

Hamed Nasreldin Taha, Ahmed Gamal, Sarah Hamed Nasreldin

(Submitted on 7 Oct 2017)

In this study, we introduced a new simple effective technique for the treatment of diabetic retinopathy by the treatment of the periphery of the retina by transscleral micropulse diode laser (Taha Technique). Macular edema was improved and vitreous hemorrhage was disappeared in most of the cases.

Subjects: **Tissues and Organs (q-bio.TO)**
Cite as: arXiv:1710.02628 [q-bio.TO]
(or arXiv:1710.02628v1 [q-bio.TO] for this version)

Submission history

From: Sarah Hamed Nasreldin Taha [view email]
[v1] Sat, 7 Oct 2017 03:56:14 GMT (1076kb)

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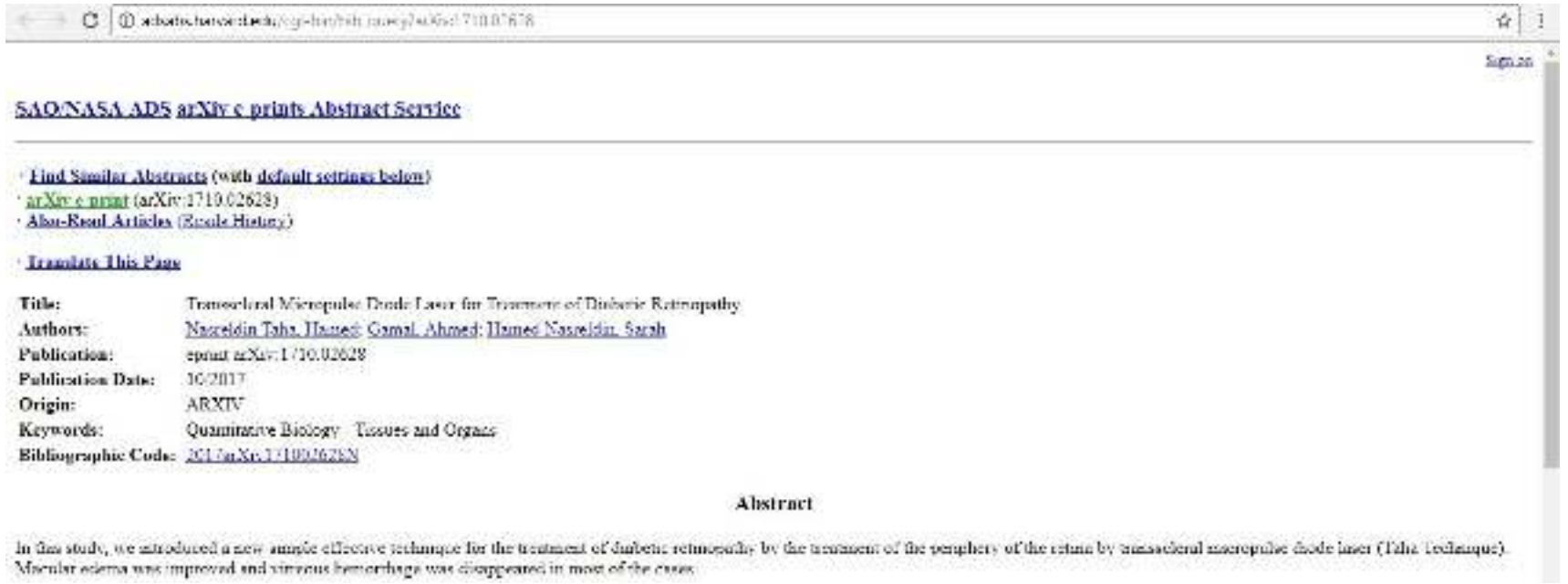

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Title: Transorbital Micropulse Diode Laser for Treatment of Diabetic Retinopathy
Authors: Nasreldin Taha, Hamed; Gamal, Ahmed; Hamed Nasreldin, Sarah
Publication: eprint arXiv:1710.02628
Publication Date: 10/2017
Origin: ARXIV
Keywords: Quantitative Biology - Tissues and Organs
Bibliographic Code: 2017arXiv171002628N

Abstract

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Trans-Scleral Subthreshold Micropulse Diode Laser for Treatment of Diabetic Retinopathy

Ahmed H.

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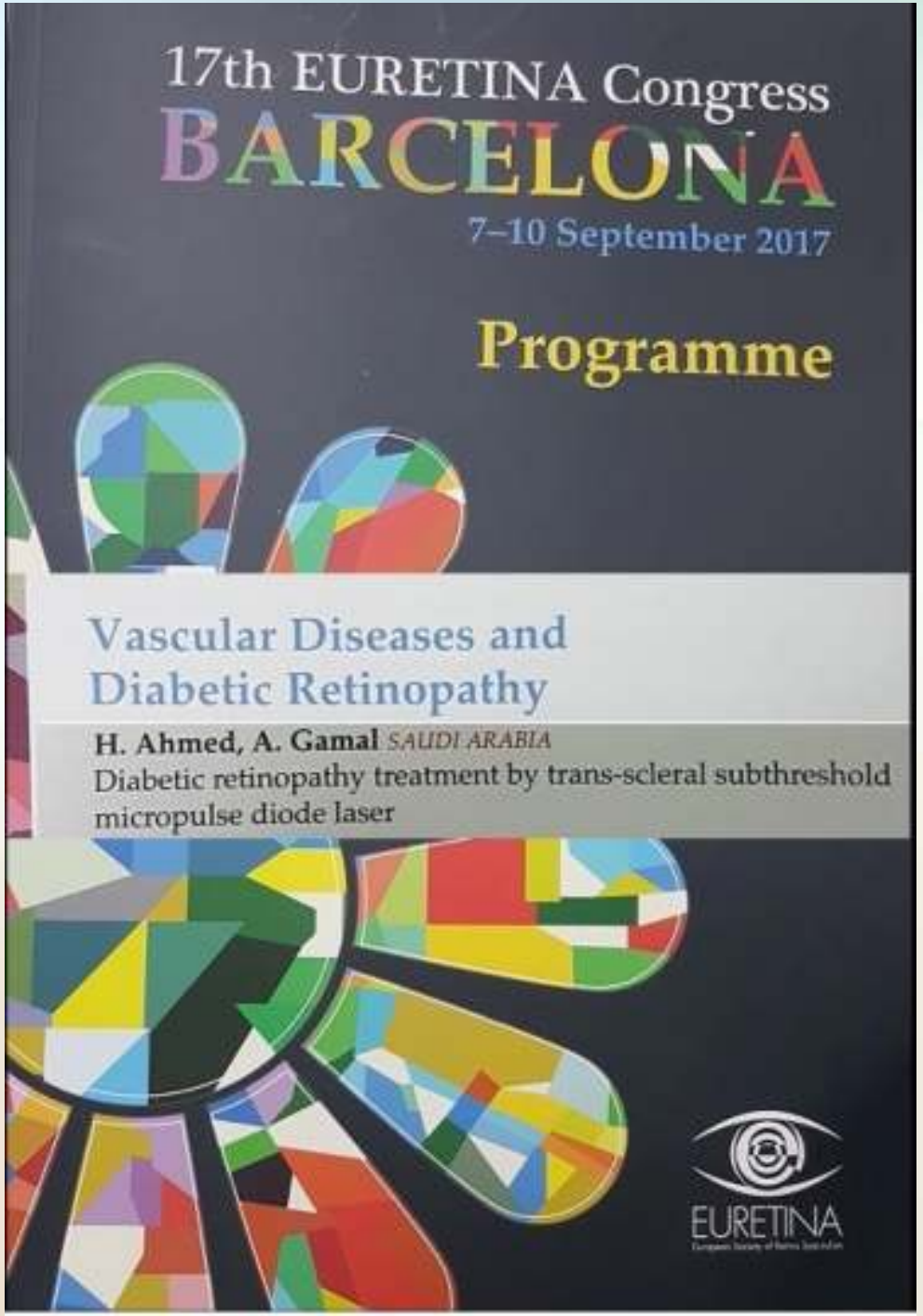
Introduction/Background: Full thickness retinal damag
not be needed to obtain beneficial effect from laser. The
pigment epithelium (RPE) plays a significant role in repair
outer and inner blood-retinal barrier regardless of the typ
location of laser application. The absence of micropulse c
retinal laser damage permits re-treatment of the same are
aim is to study the effect of diabetic retinopathy treatm
trans-scleral subthreshold micropulse diode laser.

Methods: This study included 46 eyes of 34 patients wh
diabetic macular edema and/or proliferative diabetic retino
Patients were divided into 2 groups:

Group 1 has macular edema thickness less than 400 µm.


17th EURETINA Congress
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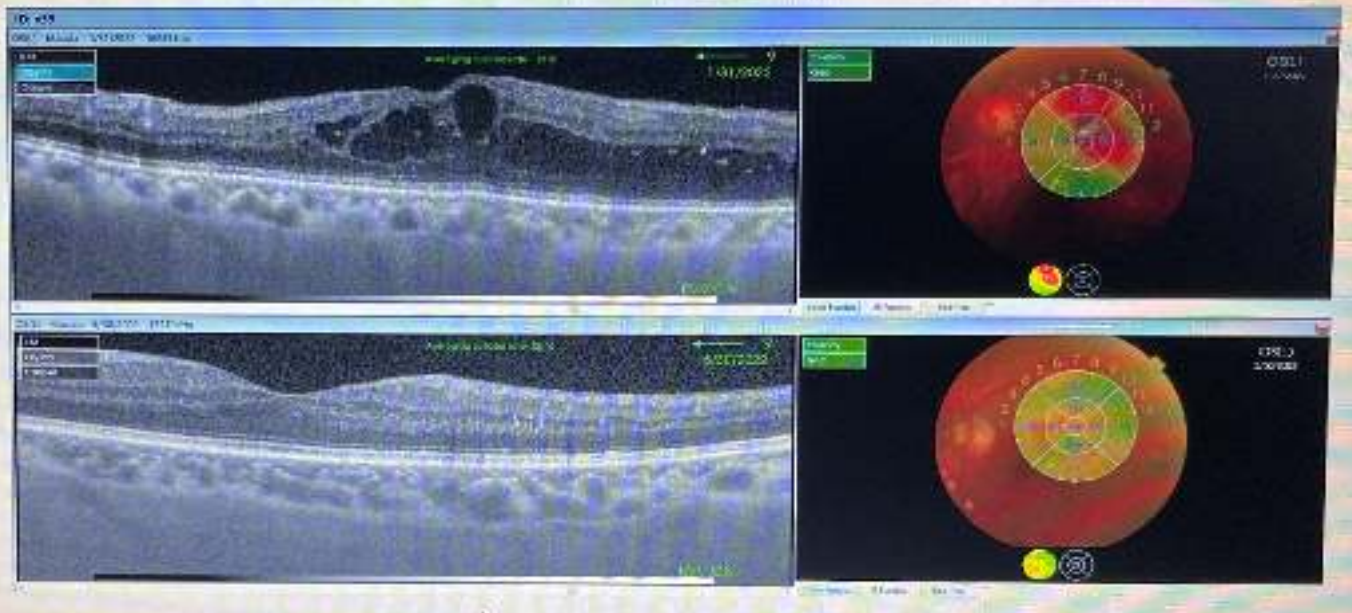
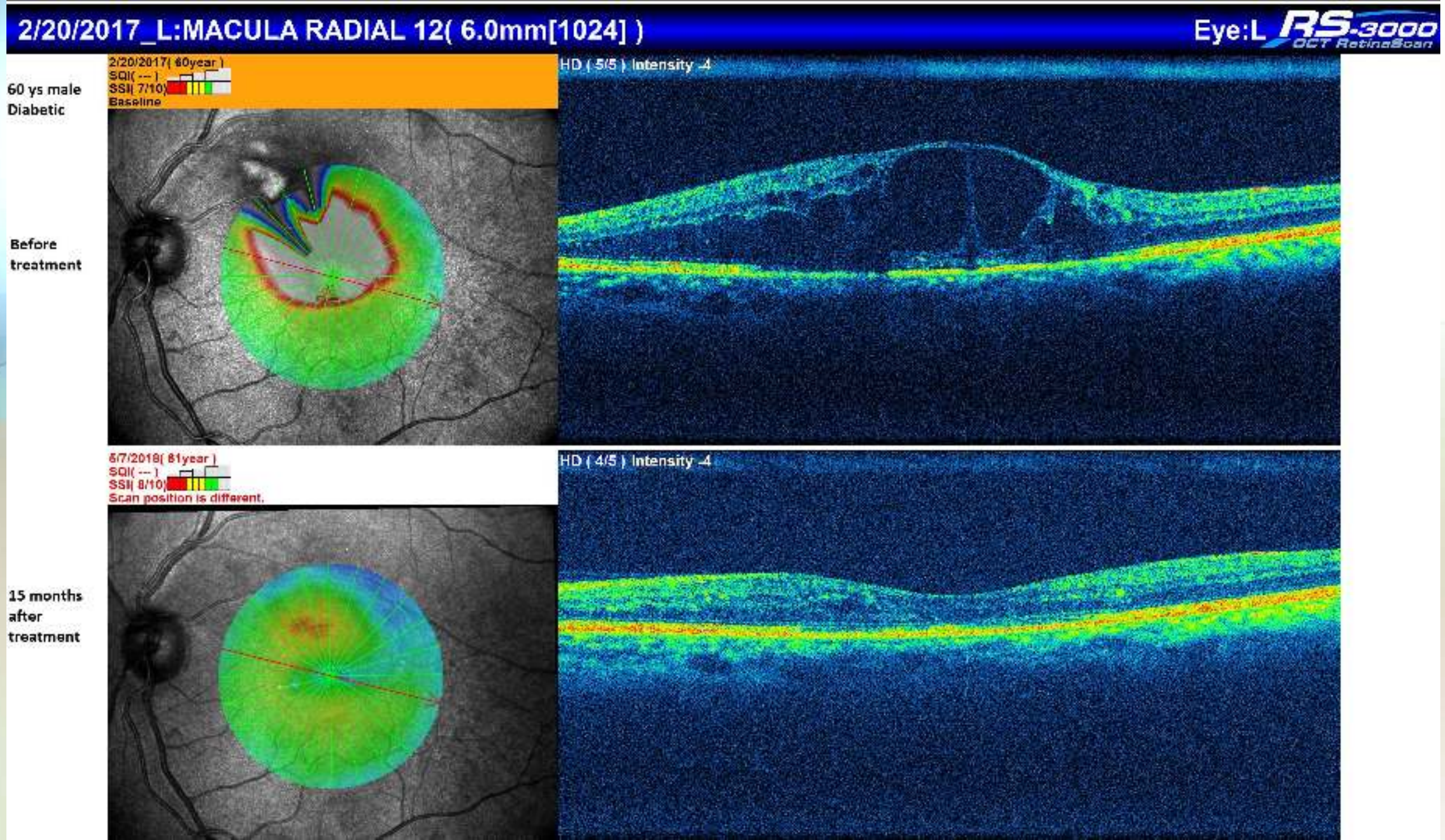
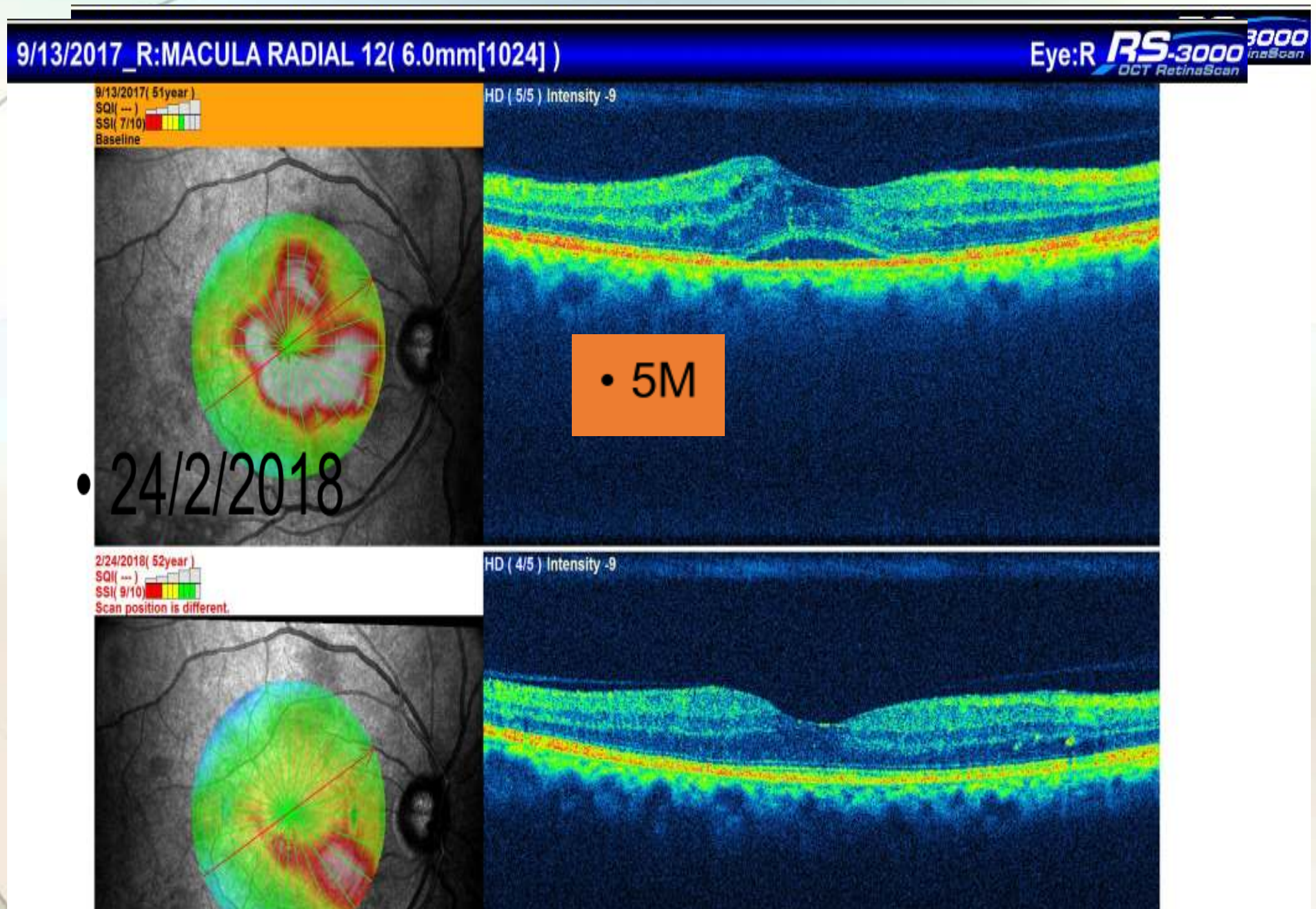
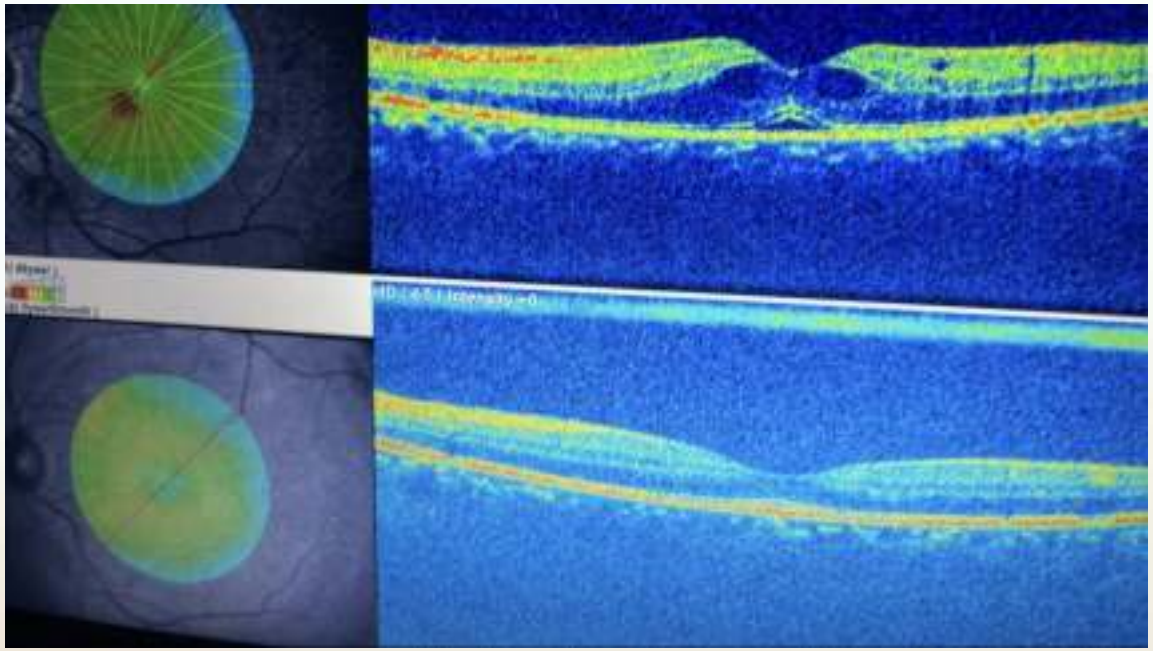
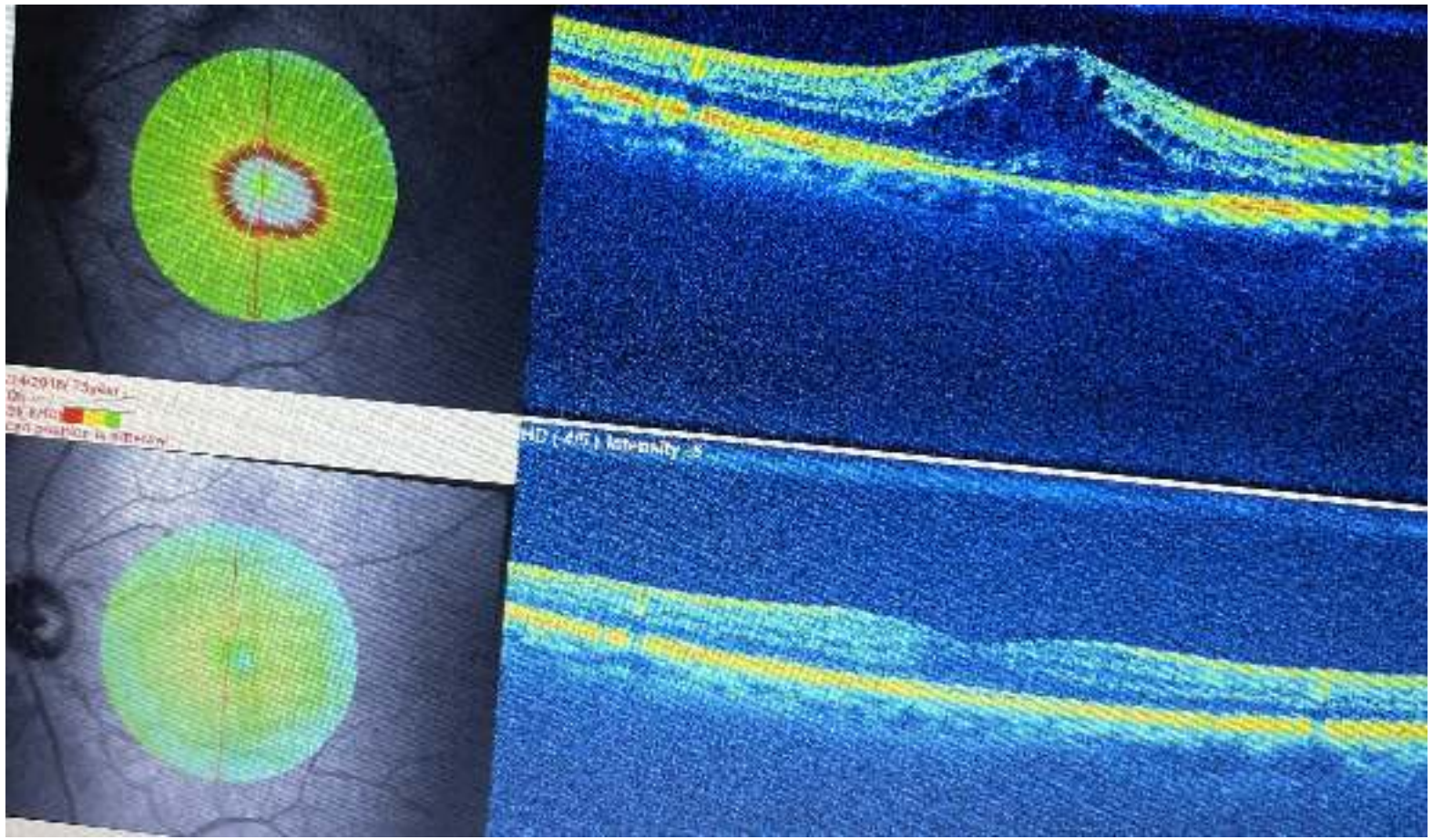


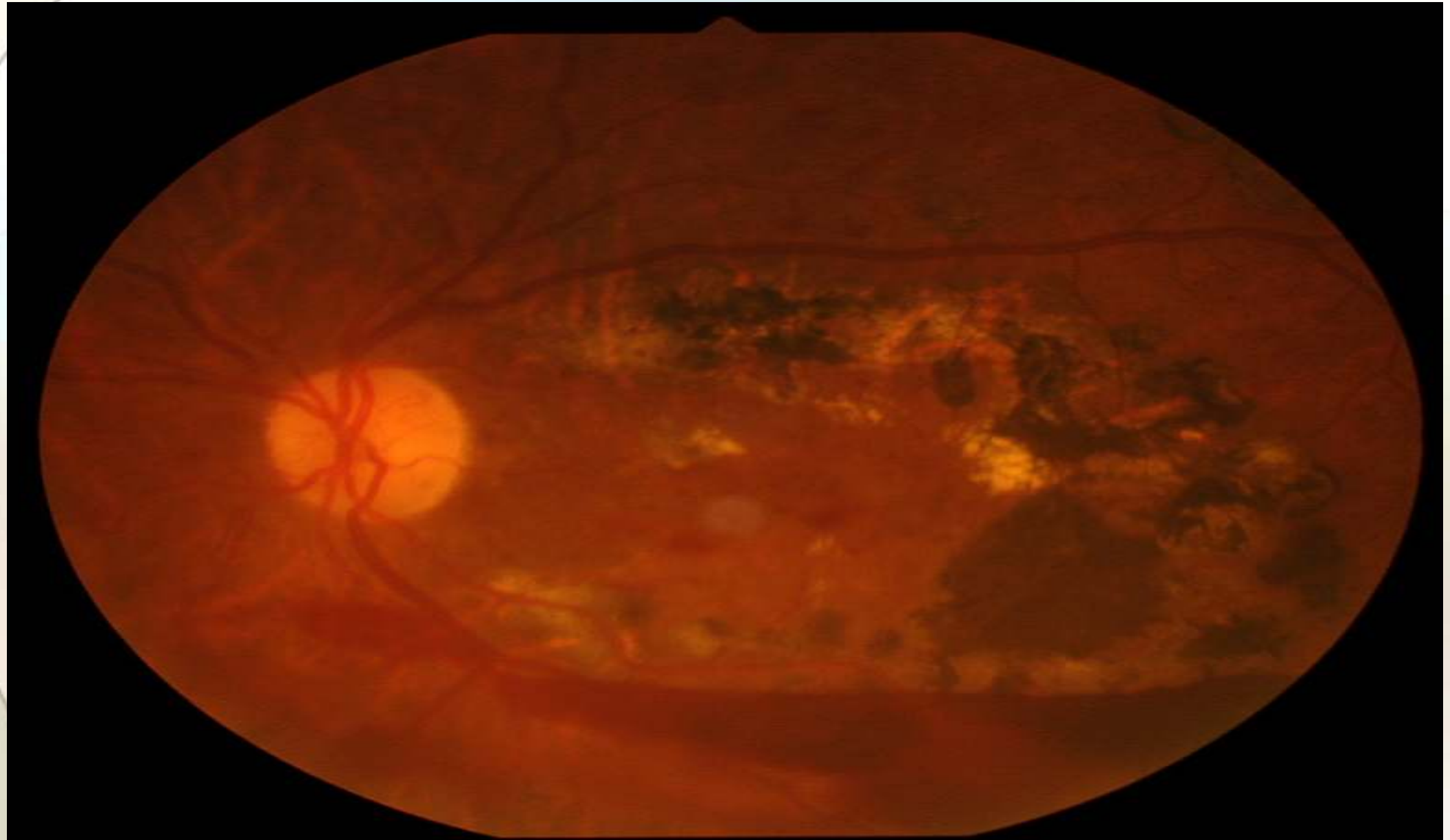

2/20/2017_L:MACULA RADIAL 12(6.0mm[1024])
Eye:L
RS-3000
OCT RetinaScan
60 ys male
Diabetic
2/20/2017(60year)
SQI(---)
SSI(7/10)
Baseline
HD (5/5) Intensity -4
Before
treatment
5/7/2018(61year)
SQI(---)
SSI(8/10)
Scan position is different.
HD (4/5) Intensity -4
15 months
after
treatment

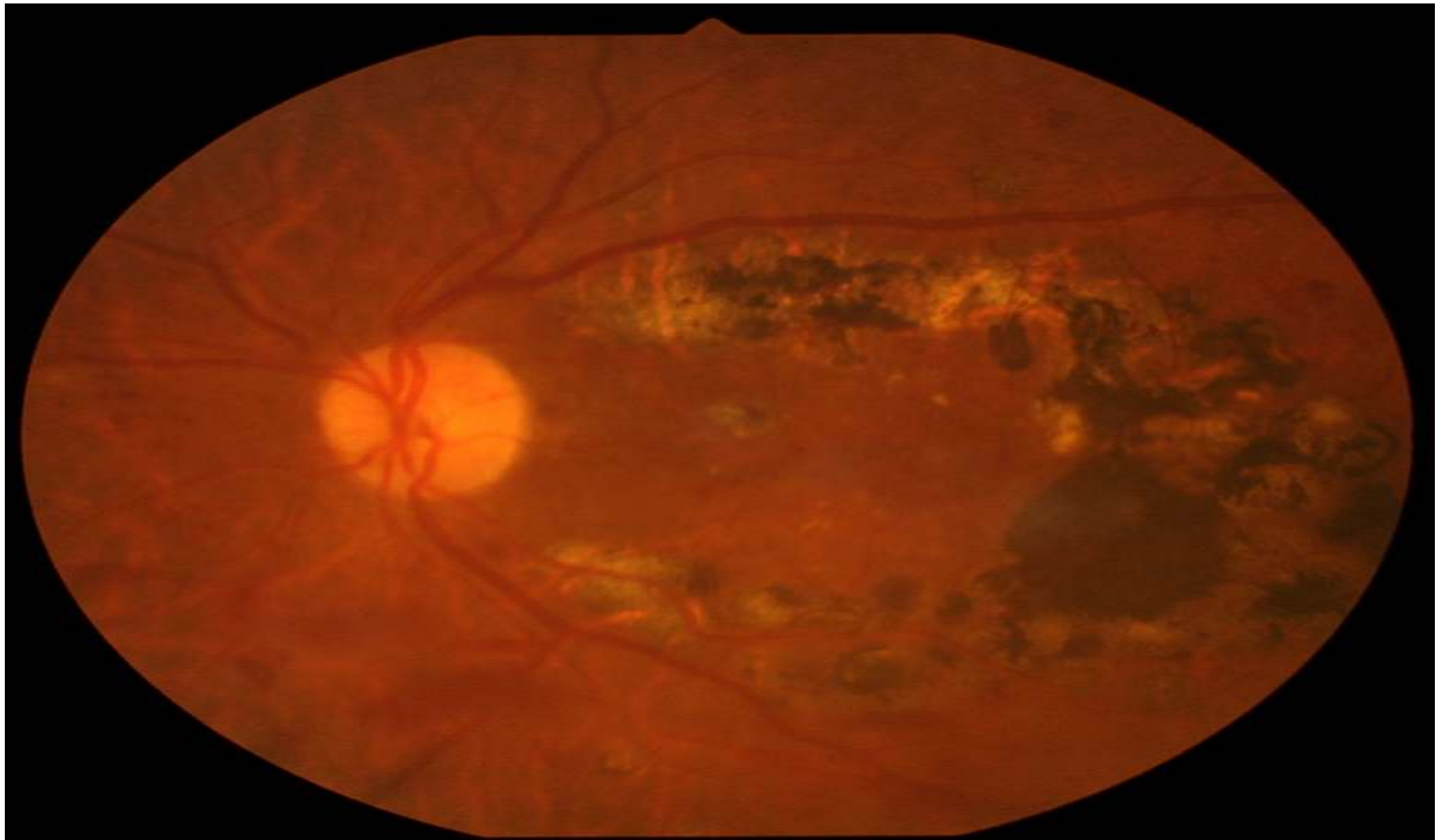

9/13/2017_R:MACULA RADIAL 12(6.0mm[1024])
Eye:R
RS-3000
OCT RetinaScan
9/13/2017(51year)
SQI(---)
SSI(7/10)
Baseline
HD (5/5) Intensity -9
• 5M
• 24/2/2018
2/24/2018(52year)
SQI(---)
SSI(9/10)
Scan position is different.
HD (4/5) Intensity -9

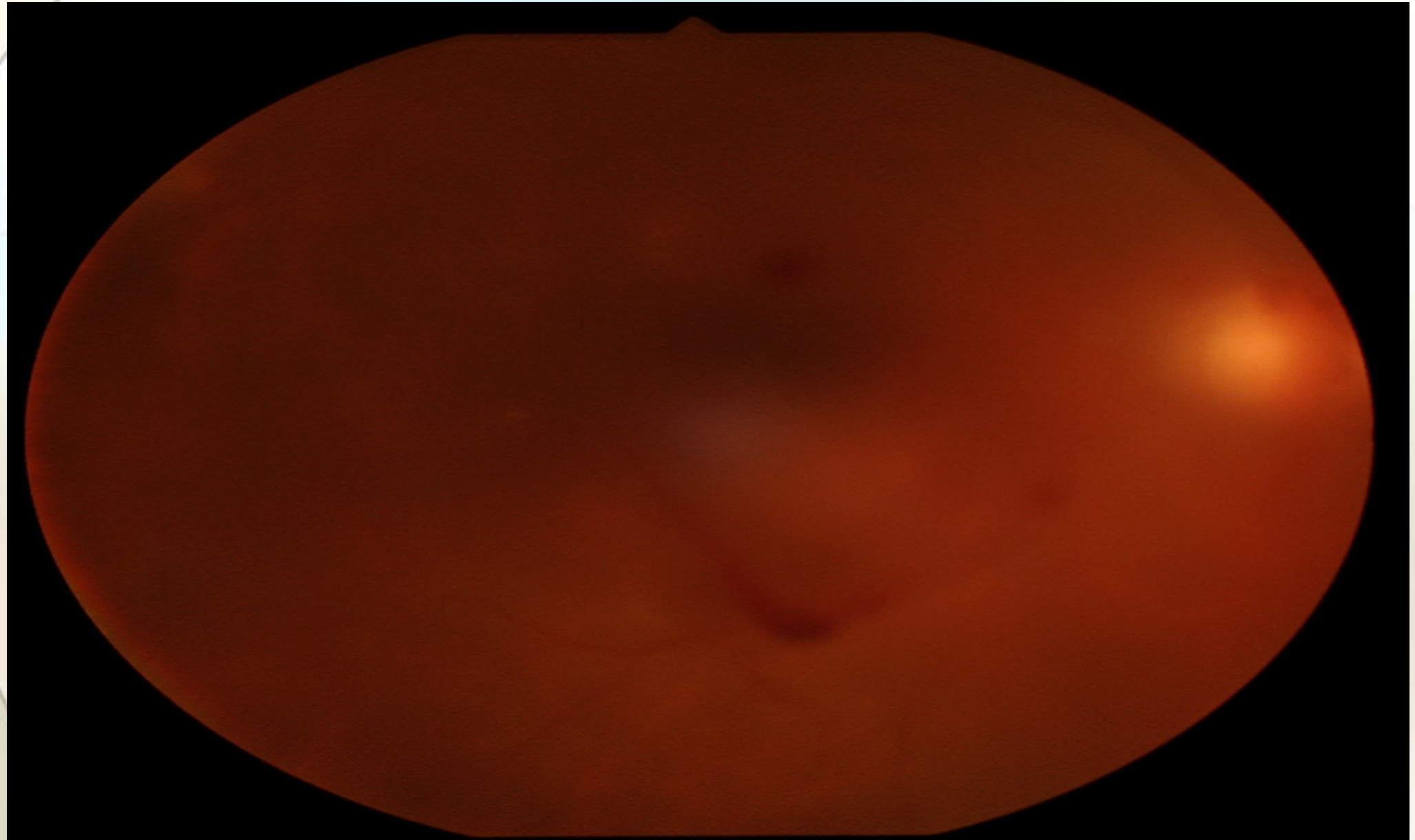


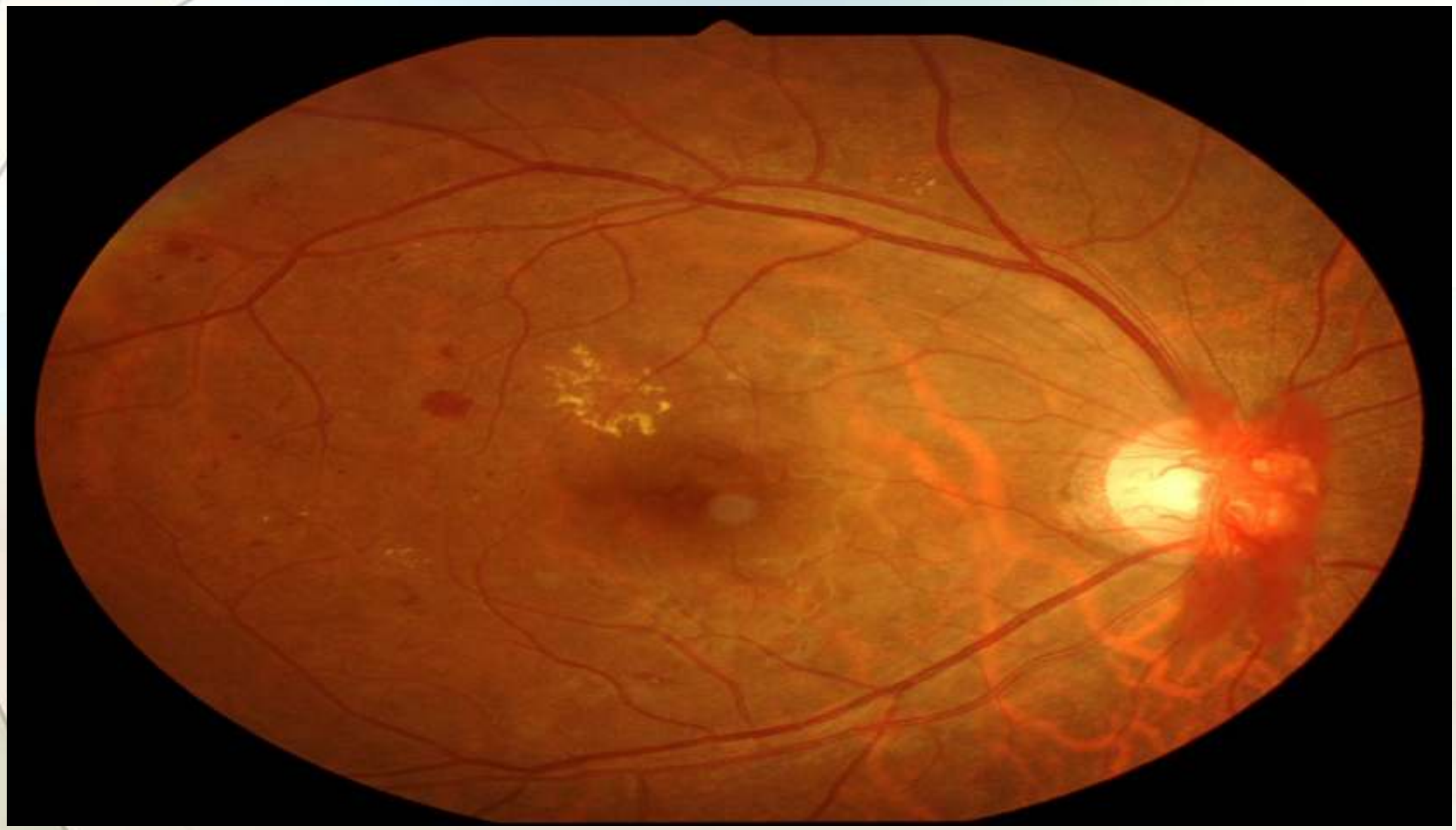


Case Before treatment









In conclusion

TSMPL seems to cause a slow and generalized restoration of retinal homeostasis that includes blood-retinal barrier repair, reduction of local inflammation and widespread cellular normalization over the long term.

This technique targets peripheral retinal ischemia , repeatable safety, no contact lens required, easy and helpful in media limitation.


thank
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