2RT® DIABETIC CSME TREATMENT GUIDELINES

IMPORTANT: The following treatment guidelines are based on the procedures reported in the evidence-based literature[1,2] and are provided for information purposes only.

1. PATIENT SELECTION

2RT (Retinal Rejuvenation Therapy) is indicated for Clinically Significant Macular Edema (CSME) due to Diabetic Retinopathy.

For the purpose of these guidelines, a patient is considered to have clinically significant macular edema (CSME) when one of the following characteristics is present upon clinical examination:

1. Any retinal thickening within 500 microns of the center of the macula.
2. Hard exudates within 500 microns of the center of the macula, with adjacent retinal thickening.
3. Retinal thickening of at least 1 disc area in size, any part of which is within 1 disc diameter of the center of the macula.[3,4]

2RT is contraindicated in any situation where the view of the target tissue (retinal pigment epithelium [RPE]) is compromised or limited.

2. PRE-TREATMENT

Apply a topical mydriatic and local anaesthetic drops into the conjunctival sac of the eye to be treated.
It is recommended that patients should be able to achieve a 5 mm pupil dilation.

3. TREATMENT

A. Set-Up:

Position the patient's head on the chinrest of the 2RT laser system.

Position and focus the slit lamp microscope including the eyepiece dioptre settings to observe the eye to be treated.

B. Contact Lens:

Use of a contact lens that approximates a 1:1 conversion ratio, such as Area Centralis, for observation and laser application.

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3. TREATMENT (CONTINUED)

C. Power Setting:

Apply test applications of single laser pulses spaced approximately one laser spot diameter (400 microns) apart outside the arcades while increasing the power until a faintly visible blanching of the lasered spot is observed.

- Do this by initially setting the power to the minimum 0.1 mJ and increase by two steps to 0.3 mJ. If necessary, increase the power by an additional one step until the blanching point is reached. It is recommended to not increase power beyond 0.4 mJ.
- Reduce the power by one step of this blanching point setting and then apply the laser in the outer macula, as described on the following page.

D. Spot Placement:

The evidence-based literature reported treatment success using a loose grid laser pattern to the area of edema (one laser spot diameter apart).[1,2] (Refer to Figure 1.)

Do not place laser applications within 500 microns of the fovea.

Do not place laser applications closer than one disc diameter from the edge of the optic disc.

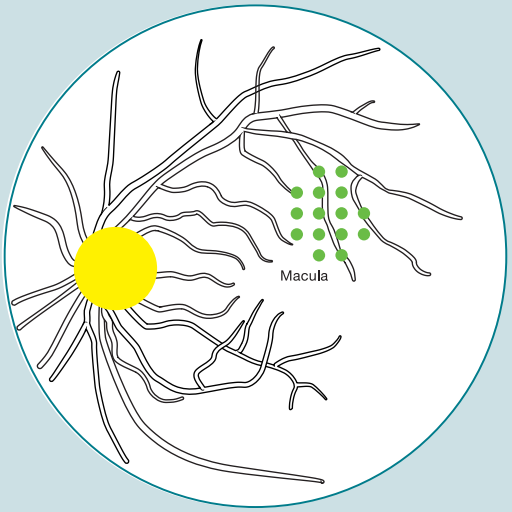

Figure 1. Sample Laser Application

4. POST-TREATMENT

Periodic re-check of treated eye to be determined by treating ophthalmologist.

5. OBSERVABLE SIDE EFFECTS

No treatment-related adverse events have been reported in the evidence-based literature. However, one case of intraoperative retinal discolouration (which resolved), likely due to excessive levels of power, was noted.[2]

REFERENCES

1. Casson RJ, Raymond G, Newland HS, Gilhotra JS, Gray TL., Pilot randomized trial of a nanopulse retinal laser versus conventional photocoagulation for the treatment of diabetic macular Edema Clin Experiment Ophthalmol. 2012 Aug;40(6):604-10. doi: 10.1111/j.1442-9071.2012.02756.x. Epub 2012 Mar 21
2. Pelosini L, Hamilton R, et al., Retinal Rejuvenation Therapy for Diabetic Macular Edema – a pilot study., Retina 2013 Mar; 33(3) :548-58
3. 2RT Operator Manual
4. Early Treatment Diabetic Retinopathy Study Report Number 2: Treatment techniques and clinical guidelines for photocoagulation of diabetic macular edema. Ophthalmology 94:761-774, 1987