

# Take care of MP TSCPC



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1

**TSCPC**

**Continuous wave therapy (CW-TSCPC)**

**Micropulse OR Subcyclo (MPTSCPC)**

**THERMOCYCLO**  
2000 mW  
Advanced Settings  
ESC  
2.0s  
M  
In  
+

**SUBCYCLO**  
2000 mW  
Advanced Settings  
ESC  
30s  
Power  
2  
31.2%

2

### TSCSP.

2000 mW

- Continuous wave
- No cooling time
- Tissue temperature builds up
- Damage in targeted and adjacent tissue

### SUBCYCLO

2000 mW

- Ultrashort and repetitive pulses
- REST PERIODS: Tissue cooling times
- Minimal adjacent tissue damages

3

#### Laser coagulation with CW laser

continuous wave laser (CW)

coagulation threshold

coagulation

stimulation

tissue temperature

#### Microsecond pulsing treatment

microsecond pulses

coagulation threshold

coagulation

stimulation

tissue temperature

Subthreshold cyclophotocoagulation was equally effective to cyclodestruction while preserving the ciliary body structures

4

## SUBCYCLO (SUBTHRESHOLD DIODE LASER)

duty cycle 31,3 %

More efficient

duty cycle 25 %

- earlier disease, good vision
- inflammatory diseases and conjunctivous inflammation
- Retreatment (difficult cases)



DUTY CYCLE = 25%

ON Time / (ON + OFF time) = 25%

$630 \mu\text{s} / (630 \mu\text{s} + 1900 \mu\text{s}) = 25\%$

Ultrashort and repetitive pulses  
REST PERIODS: Tissue cooling times  
Minimal adjacent tissue damages

5

## Procedure



6

transscleral illumination of the ciliary body can increase the accuracy of the probe localization.



7

A Novel non destructive cyclophotocoagulation procedure:



- **As efficient as** the thermal cyclophotocoagulation procedure
- **Preserving** the structures of the ciliary body (no destructive effects)
- **Improving** the uveoscleral outflow
- **Avoiding** the side effects of the thermal cyclophotocoagulation procedure
- A **safe** and **repeatable** treatment
- Potentially allowing for **earlier laser interventions**

8

# Case Presentation

9

- male patient, 80 y. old, and hypertensive.
- POAG on brimonidine, latanoprost, timolol, and dorzolamide
- BCVA : 20/50, IOP : 25 mm Hg.
- SubCYCLO treatment settings:
  - Power : 2000 mw
  - Duty cycle : 25 %
  - Duration : 160 seconds

10

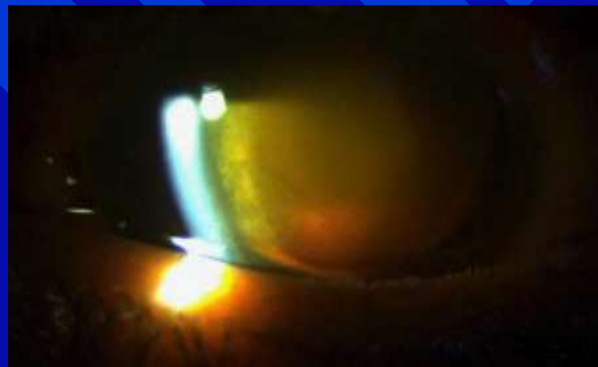
- The procedure was performed without any immediate complications.
- Two days after the procedure, he presented with fibrinous reaction and hyphema drop of vision to LP IOP of 22 mm Hg.

11

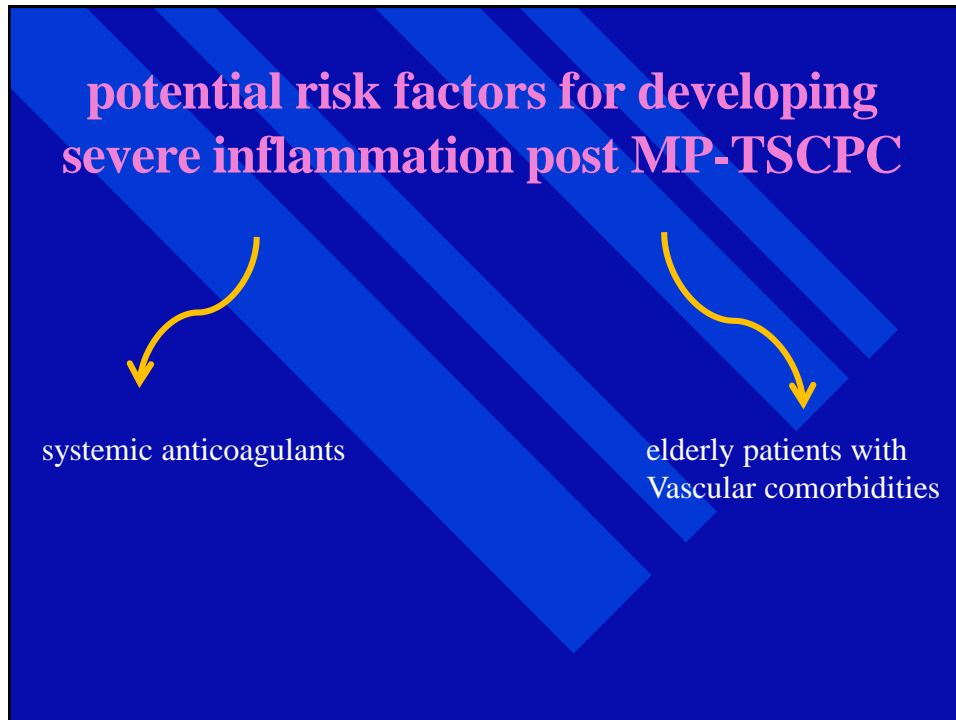
- Medical treatment with topical steroid and atropine:

vision improved to HM,  
IOP reduced to 10 mm Hg

But, **Persistent dense fibrin membrane.**



12



13

***Take Home Message***

- Any intervention has potential risks even in a procedure known for its safety profile with very few reported side effects.
- Individualizing benefits versus risks profile for patients allow to avoid side effects of MP-TSCPC.

14

