



Glaucoma Clinical Data

MicroPulse Transscleral Cyclophotocoagulation (MP-TSCPC)

MP-TSCPC Peer Reviewed Studies

| Name of Study / Authors | Published | Source | Glaucoma Stage / Type | Number of Patients / Number of Eyes | Mean Age of Patients | IOP Decrease (mean drop) | Medication Decrease (Mean Drop) | Main Outcome (Results) | Follow-Up Length | CG6 Case Settings | Conclusions |
|---|---------------------|---------------------------------------|------------------------|-------------------------------------|----------------------|--------------------------------|---------------------------------|--|------------------------------|--|--|
| Micropulse versus continuous wave transscleral diode cyclophocoagulation in refractory glaucoma: a randomized exploratory study. (M. Aquino / P. Chew) Learn more » | 2015 43(1):40-6 | Clinical & Experimental Ophthalmology | Refractory | 48 patients | MP 63.5 CW 66 | 52% | | 75 % overall success rate (52 % @ 18 mo) | 18 months | 2000mW / 50x2 sec (per each quadrant) | MP-TSCPC and CW are effective in lowering IOP. The MicroPulse mode provided a more consistent and predictable effect in lowering intraocular pressure with minimal ocular complications. |
| Micropulse transscleral diode laser cyclophocoagulation in the treatment of refractory glaucoma. (A. Tan / P. Chew) Learn more » | 2010 38: 266–272 | Clinical & Experimental Ophthalmology | Refractory | 38 patients / 40 eyes | 63.2 | 35% (16 mmHg drop) | 0.8 (from 2.1 to 1.3) | 72.7% success rate (@1.3 treatment) | 18 months (Mean 16.3 months) | 2000mW / 100 sec (50 sec per each hemisphere) | Micropulse TSCPC is a safe and effective method of lowering IOP in cases of refractory glaucoma and comparable with conventional TSCPC. |
| Micropulse Cyclophocoagulation: Initial Results in Refractory Glaucoma. (M. Emanuel / S. Goyal) Learn more » | 2017 26:726–729 | J Glaucoma | Refractory | 84 Eyes | 74 | 41.2% | 1.35 (from 3.3 to 1.9) | IOP Mean drop 15.5 mmHg @ 6mo 18 mmHg @ 12mo | Mean 4.3 months | Mean Power 1939mW Mean time 319 sec (160x2 per each hemisphere) | The outcomes of our study are promising, with good evidence of the IOP-lowering effects of MP-TSCPC and decreased need for ocular antihyper-tensive medications postlaser at 6 months. |
| Outcomes of MicroPulse Laser TSCPC on Pediatric vs Adult Glaucoma Patients. (J. Lee / S. Lin) Learn more » | 2017 26:936–939 | J Glaucoma | Moderate to Refractory | 34 patients / 36 eyes | 60.6 | Adults: 33.2% Pediatric 21% | 0.5 (from 3.0 to 2.5) | Adults: 72.2% Pediatric: 22.2% @ 12 mo | 12 months (1, 3, 6 & 12) | Mean Power 2000 mW Time = 160 sec (80 x2 per each hemisphere) | MP-TSCPC is a safe procedure in pediatric and adult glaucoma patients, but the IOP reduction does not last long in pediatric patients. |
| Treatment Outcomes of Micropulse TSCPC in Advanced Glaucoma (IQ 810 / MP). (S. Kuchar / M. Moster) Learn more » | 2016 31:393–396 | Laser Med Sci | Refractory | 19 patients | 71.2 | 40.1% | 0.7 (from 2.6 to 1.9) | 73.7% success rate @1 st treatment 89.5 % success rate @ 2 nd treatment | Mean 60.3 days | Mean Power 2000mW Time 100 to 240 sec (50 to 120 sec per each hemisphere) | The novel MP-TSCPC laser had a high rate of surgical success after a short follow-up period in patients with advanced glaucoma. |
| Long-term Efficacy of Micropulse Diode Transscleral Cyclophocoagulation in the Treatment of Refractory Glaucoma. (M. Aquino / P. Chew) Learn more » | 2017 | Laser Med Sci | Refractory | 14 patients | 59.9 | 39% | 0.7 (from 1.8 to 1.1) | 67% success rate (14 ptns @ 39% IOP drop) | Mean 78 months | 2000mW / 50x2 sec (per each quadrant) | Micropulse diode transscleral cyclophocoagulation was effective in the long term IOP control of refractory glaucoma. |

Other Clinical Evidence

| Name of Study / Authors | Published | Source | Glaucoma Stage / Type | Number of Patients / Number of Eyes | Mean Age of Patients | IOP Decrease (mean drop) | Medication Decrease (Mean Drop) | Main Outcome (Results) | Follow-Up Length | CG6 Case Settings | Conclusions |
|--|---------------------|--|------------------------|-------------------------------------|----------------------|--------------------------|---------------------------------|---|------------------|---|--|
| Early Outcomes of Micropulse Diode Transscleral Cyclophototherapy for the Treatment of Mild to Moderate Glaucoma. (M. Aquino / P. Chew) Learn more » | Nov 18 2017 | Korean Glaucoma Society Annual Meeting | Mild to Moderate | 12 patients / 12 eyes | MP 63.5 CW 66 | 35.9% at 1 month | 0.8 (from 3.2 to 2.4) | 63.6% overall success rate | Mean 4.8 months | 2000mW / 50x2 sec (per each quadrant) | Micropulse diode cyclophototherapy is a safe and effective method of lowering IOP even in cases of mild to moderate glaucoma. |
| The benefits of micropulse TSCPC for early-stage glaucoma treatment. (R. Noecker) Learn more » | Nov 2017 Vol 13, #9 | Ophthalmology Times Europe | Mild to Moderate | 95 patients | N/A | 30.3% at 12 months | 1.6 (from 3.0 to 1.4) | N/A | Mean 12 months | 2000/2500mW 90 sec (per each hemisphere) | In addition to attacking the disease on the inflow front, there is evidence that IOP lowering is causal to a dual mechanism of decreased aqueous production and increased porosity producing uveoscleral outflow action. |
| Micropulse transscleral diode laser cyclophotocoagulation: Mid to long term results. (M. Masis / S. Lin) Learn more » | March 2017 | AGS | Mild to Late Stage | 57 patients | 67 | 28.9% | 0.2 (from 3.5 to 3.3) | IOP Mean drop 6.9 mmHg | Mean 21.5 months | 2000/2500mW 90 sec (per each hemisphere) | Micropulse TCP is effective in lowering IOP in the majority of patients in this study in a mid-long term follow up, and appears safe with no major complications. |
| MicroPulse Trans-scleral Cyclophotocoagulation (mTSCPC) for the Treatment of Glaucoma Using the MicroPulse P3 Device. (N. Radcliffe / S. Vold / Ike Ahmed) Learn more » | March 2015 | AGS | Moderate to Late Stage | 45 patients / 48 eyes | N/A | 29.8% at 3 months | 0.9 (from 3.3 to 2.4) | 21.6% at Week 1 30.0% at Month 1 29.8% at Month 3 | 3 months | Mean Power 2000-2250mW Time=100 to 180 sec (50 to 90 sec per each hemisphere) | The mTSCPC procedure is a promising new treatment for glaucoma that offers a safe and effective alternative to established, more destructive treatment modalities. |

Other Clinical Evidence

Articles

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Posters and Podium Presentations

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3. Ayyala R, Yelenskiy A, Gillette T, Worley N, Stern G, Young C, Aresomena A, Garris W. *Safety and efficacy of micropulse transscleral cyclophotocoagulation diode laser in treating glaucoma: Intermediate term results*. American Glaucoma Society. 2017. Coronado, CA.
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12. Khan FH, Pikey K, Krishna R. *The micropulse cyclophotocoagulation technique can be a safe and effective treatment for patients with refractory glaucoma*. *Invest Ophthalmol Vis Sci.*, 2017;58(8):4992-4992.
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14. Lima F, Avila M. *Micropulse transscleral cyclophotocoagulation after endoscopic cyclophotocoagulation failure in refractory glaucoma*. World Glaucoma Conference. 2017. Helsinki.
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16. Amoozgar B, Feinstein M, Porco T, Lee JH, Stewart JM, Han Y. *Comparison of long-term clinical outcomes between micropulse transscleral cyclophotocoagulation and endoscopic cyclophotocoagulation-plus*. American Glaucoma Society, 2018, New York City, NY. [Learn more »](#)

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