Glaucoma Clinical Data

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

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<tr>
<td>Early Outcomes of Micropulse Diode Transscleral Cyclophotocoagulation for the Treatment of Mild to Moderate Glaucoma. (M. Aquino / P. Chew)</td>
<td>Nov 18 2017</td>
<td>Korean Glaucoma Society Annual Meeting</td>
<td>Mild to Moderate</td>
<td>12 patients / 12 eyes</td>
<td>MP 63.5 CW 66</td>
<td>35.9 % at 1 month</td>
<td>0.8 (from 3.2 to 2.4)</td>
<td>63.6% overall success rate</td>
<td>Mean 4.8 months</td>
<td>2000mW / 50x2 sec (per each quadrant)</td>
<td>Micropulse diode cyclophotocoagulation is a safe and effective method of lowering IOP even in cases of mild to moderate glaucoma.</td>
</tr>
<tr>
<td>The benefits of micropulse TSCPC for early-stage glaucoma treatment. (R. Noecker)</td>
<td>Nov 2017</td>
<td>Ophthalmology Times Europe</td>
<td>Mild to Moderate</td>
<td>95 patients</td>
<td>N/A</td>
<td>30.3% at 12 months</td>
<td>1.6 (from 3.0 to 1.4)</td>
<td>N/A</td>
<td>Mean 12 months</td>
<td>2000/2500mW / 90 sec (per each hemisphere)</td>
<td>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.</td>
</tr>
<tr>
<td>Micropulse transscleral diode laser cyclophotocoagulation: Mid to long term results.  (M. Masis / S. Lin)</td>
<td>March 2017</td>
<td>AGS</td>
<td>Mild to Late Stage</td>
<td>57 patients</td>
<td>67</td>
<td>28.9%</td>
<td>0.2 (from 3.5 to 3.3)</td>
<td>IOP Mean drop 6.9 mmHg</td>
<td>Mean 21.5 months</td>
<td>2000/2500mW / 90 sec (per each hemisphere)</td>
<td>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.</td>
</tr>
<tr>
<td>MicroPulse Trans-scleral Cyclophotocoagulation (mTSCPC) for the Treatment of Glaucoma Using the MicroPulse P3 Device. (N. Radcliffe / S. Vold / Ike Ahmed)</td>
<td>March 2015</td>
<td>AGS</td>
<td>Moderate to Late Stage</td>
<td>45 patients / 48 eyes</td>
<td>N/A</td>
<td>29.8% at 3 months</td>
<td>0.9 (from 3.3 to 2.4)</td>
<td>21.6% at Week 1 30 0% at Month 1 29.8% at Month 3</td>
<td>3 months</td>
<td>Mean Power 2000-2250mW Time=100 to 180 sec (50 to 90 sec per each hemisphere)</td>
<td>The mTSCPC procedure is a promising new treatment for glaucoma that offers a safe and effective alternative to established, more destructive treatment modalities.</td>
</tr>
</tbody>
</table>
Other Clinical Evidence

Articles
1. Bendel RE, Patterson MT. Observational report: Improved outcomes of transscleral cyclophotocoagulation for glaucoma patients. Medicine, 2017;96(23):e6946. Learn more »

Posters and Podium Presentations
Other Clinical Evidence


34. Ghazal K. *Early result of micro pulse cyclophotocoagulation in glaucoma cases resistant to medication*. World Glaucoma Conference, 2018, Barcelona, Spain. [Learn more »](#)

35. Massad II. *No more blades, scars or scares: A one year experience of micropulse trans-scleral cyclophotocoagulation from middle east*. World Glaucoma Conference, 2018, Barcelona, Spain. [Learn more »](#)

**Posters and Podium Presentations - Pre-Clinical**


37. Johnstone TM. *Collector channel entrances dynamically close & open in humans as imaged by OCT: Consideration in migs selection and placement?* American Glaucoma Society, 2018, New York City, NY. [Learn more »](#)
