

Supplementary Table 2. Summary of published papers on the PreserFlo™ Microshunt

Study	Design	Number of eyes	Pre-op IOP	Post-op IOP	Pre-op visual field MD	Pre & post-op number of antiglaucoma drops	Complications, Interventions, Reoperations	MMC concentration	Complete success (CS) Qualified Success (QS)
Durr 2022 ¹	Retrospective, single-centre series over 4 years looking at 1-year results of Microshunt implantation in cases of previously failed filtration surgery.	85 eyes from 79 patients	Median: 22.0	Median: 13.0	Mean: -15.4	Mean: Preop = 4 Post-op = 0	Choroidal detachment 12.9% Hypotony maculopathy 3.5% Early needling 5.9% Late needling 5.9% Reoperation 7.1%	0.2-0.5 mg/ml for 2 minutes	CS 61.0% QS 79.7%
Baker 2021 ²	Prospective, single-masked, multicentre, non-inferiority RCT for mild to severe POAG uncontrolled on maximal medical therapy. Randomised 3:1 Microshunt to trabeculectomy, 1-year results from 2-year study.	527 eyes (395 eyes Microshunt, 132 eyes trabeculectomy)	Mean: Microshunt 21.1 ± 4.9 Trabeculectomy 21.1 ± 5.0	Mean reduction: Microshunt 14.3 ± 4.3 (29.1%) Trabeculectomy 11.1 ± 4.3 (45.4%)	44% moderate or severe disease, MD < -12.01	Mean at 1 year: Microshunt 0.6 ± 1.1 Trabeculectomy 0.3 ± 0.9	At least 1 intervention Microshunt 40.8% Trabeculectomy 67.4% Needling Microshunt 19% Trabeculectomy 8.3% Transient hypotony Microshunt 28.9% Trabeculectomy 49.6% Persistent hypotony Microshunt 7.7.1% Trabeculectomy 21.2% Reoperation Microshunt 14.9% Trabeculectomy 11.4%	0.2 mg/ml for 2 minutes	Primary end point success: Microshunt 53.9% Trabeculectomy 72.7%
Battle 2016 ³	Prospective, non-randomised, single-site study in patients with POAG progressing on maximal medical therapy without previous glaucoma surgery. Observations were made over 3 years.	23 eyes at 1 year, 22 eyes thereafter	Mean: 23.8 ± 5.3	Mean reduction: 1 year 10.7 ± 2.8 (55%) 2 years 11.9 ± 3.7 (50%) 3 years 10.7 ± 3.5 (55%)	Mean: -20.1 ± 12.2 Range: -2.4 to -33.9	Preop: 2.4 ± 0.9 Post op: 1 year 0.3 ± 0.8 2 years 0.4 ± 1.0 3 years 0.7 ± 1.1 71% mean reduction	Choroidal detachment 8.7% Transient hypotony 13% Needling 4.3% Reoperation 4.3%	0.4 mg/ml for 3 minutes	CS 1 year 87% 2 years 86% 3 years 64% QS 1 year 100% 2 years 100% 3 years 95%
Schlenker 2020 ⁴	Retrospective, single-centre case series of isolated Microshunt in open angle glaucoma where there has been no	164 eyes in 132 patients	Median: 20.0	Median: 12	Median: -11.4	Median: Preop = 4 Postop = 0	Choroidal detachment 6.7% early, 2.5% late AC reformation 3% Needling 8.5% Reoperation 1.8%	0.2-0.5 mg/ml for 2 minutes. Later cases received higher doses	Primary (IOP ≤ 17mmHg): CS 76.9% QS 92.5%

	previous filtering or suprachoroidal surgery. 97% of eyes had 1 year follow up.								Secondary (IOP≤21mmHg): CS 76.9% QS 92.5%
Beckers 2021 ⁵	Prospective, single-arm, multicentre study over 2 years of standalone Microshunt in mild to moderate POAG that had not undergone prior incisional surgery.	81 eyes	Mean: 21.7 ± 3.4 Median: 20	Mean: Year 1 14.5 ± 4.6 Year 2 14.1 ± 3.2	Not provided	Preop: Mean 2.0 ± 1.3 Median 2.0 Postop: Mean 0.5 ± 0.9	Transient hypotony 11.1% Needling 6.2% Reoperation 9.9%	0.2-0.4 mg/ml for 2 or 3 minutes	1 year: CS 58.0% QS 74.1% 2 years: CS 59.3% QS 74.1%
Scheres 2021 ⁶	Retrospective, comparative case series comparing Xen45 implantation to Microshunt in progressive POAG. Follow-up of at least 6 months with mean of 22.4 and 18.9 months, respectively. Combined cataract surgery was permitted.	82 eyes (Xen: 41 eyes of 31 patients, Microshunt: 41 eyes of 33 patients)	Mean: Xen45 19.2 ± 4.4 MicroShunt 20.1 ± 5.0	Mean: Xen45 1 year 13.3 ± 2.9 2 year 13.8 ± 2.8 Microshunt 1 and 2 years 12.1 ± 3.5	71% moderate or severe disease, MD < -12.01 Microshunt	Preop: Xen45 2.5 ± 1.4 Microshunt 2.3 ± 1.5 Postop: 2 years Xen45 0.9 ± 1.2 Microshunt 0.7 ± 1.1	Xen:Microshunt Early hypotony 24:39% Late hypotony 8:0% Needling 20:5% Bleb revision 5:5% Operative stent adjustment 2:2% Filtration surgery 7:15%	0.2 mg/ml for 3 minutes for Microshunt	Primary endpoint (IOP ≤18 mmHg), Xen:Microshunt 1 year: CS 46:58% QS 78:79% 2 years: CS 34:49% QS 73:79%
Nobl 2021 ⁷	Retrospective, single centre, interventional study of PEXF glaucoma and POAG. 1-year results. Standalone or in combination with cataract extraction. Prior surgery including incisional filtering surgery was not excluded.	46 eyes of 41 patients (PEXG 20 eyes, POAG 26 eyes)	PEXG 21.4 ± 5.8 POAG 18.2 ± 4.5	PEXG 12.8 ± 3.0 POAG 12.9 ± 4.2	PEXG -7.65 ± 5.59 POAG -8.97 ± 7.12	Preop: PEXG 2.8 ± 1.3 POAG 2.7 ± 1.3 Postop: PEXG 0.3 ± 0.8 POAG 0.3 ± 0.8	Hypotony PEXG 40.0% POAG 11.5% Choroidal detachment PEXG 30.0% POAG 3.8% AC reformation PEXG 10% POAG 3.8% Reoperation PEXG 15.0% POAG 7.7%	0.2 mg/ml for 2 minutes	Success criteria (IOP < 18 mmHg, >20% reduction): PEXG CS 75.0% QS 80.0% POAG CS 73.1% QS 76.9%
Pillunat 2021 ⁸	Prospective, interventional, cohort study comparing Microshunt to trabeculectomy in POAG eyes without previous	52 eyes (Microshunt 26 eyes, Trabeculectomy 26 eyes)	Mean diurnal: Microshunt 15.9 Trabeculectomy 17.1 Mean peak:	Mean diurnal: Microshunt 10.8 Trabeculectomy 10.3 Mean peak:	Mean: Microshunt -8.7 Trabeculectomy -12.9	Preop: Microshunt 4 Trabeculectomy 4	Microshunt: Trabeculectomy Early hypotony 69:27% Late hypotony 0:8% AC reformation 15:23% Choroidal detachment	0.2 mg/ml for 3 minutes	Mild glaucoma, non-fixation threatening: Microshunt CS 100% Trabeculectomy CS 100%

	filtration surgery. Results at 6 months. Success criteria: mean diurnal IOP ≤ 18 mmHg in glaucoma, non-fixation threatening, and ≤ 14 mmHg for mild glaucoma, fixation-threatening (diurnal peak IOP ≤ 18 mmHg), moderate or advanced glaucoma.		Microshunt 20 Trabeculectomy 22	Microshunt 13 Trabeculectomy 12.5			15:20% Needling 4:27% Reoperation not recorded		Mild glaucoma fixation-threatening, moderate or advanced glaucoma: Microshunt CS 90% QS 95% Trabeculectomy CS 87% QS 87%
Quaranta 2021 ⁹	Retrospective review across 2 centres in Italy of Microshunt in POAG following failed primary trabeculectomy. 12-month follow-up.	31 eyes	Mean: 24.8 \pm 3.86	Mean: 12.56 \pm 2.64	Mean: -6.17 \pm 1.88	Preop: 3.3 \pm 0.6 Postop: 0.5 \pm 0.8	Transient hypotony 19.3% Choroidal detachment 9.6% Needling 19.3% Reoperation 3.2%	0.3 mg/ml for 3 minutes	Success (IOP ≤ 17 mmHg): CS 67.74% QS 93.54%
Martinez-de-la-casa 2021 ¹⁰	Retrospective, 2-centre, open-label study of Microshunt as standalone or combined-with-phaco procedure in uncontrolled open angle glaucoma with minimum 12-month follow-up data.	58 eyes (Microshunt standalone 35 eyes, combined phaco 23 eyes)	Mean: Microshunt 21.3 \pm 3.2, Combined phaco 21.5 \pm 3.3	Mean: Microshunt 14.4 \pm 3.4, Combined phaco 14.9 \pm 3.6	Mean: -6.2 \pm 3.9	Preop: 2.3 \pm 0.5 Post op: 0.2 \pm 0.5	Hypotony 1.7% Choroidal detachment 3.5% Needling not recorded Reoperation 0	0.2 mg/ml for 2 minutes	Success (IOP ≤ 18 mmHg): CS 62.1% QS 82.8%
Vastardis 2021 ¹¹	Retrospective, single-site study of Microshunt in refractory, moderate to advanced POAG in pseudophakic eyes. Implantation was with MMC, with and without Ologen collagen matrix (OCM). No previous filtering or conjunctival surgery.	50 eyes (25 eyes with OCM, 25 eyes without OCM)	Mean: Without OCM 23.5 \pm 5.8 With OCM 26.0 \pm 8.8	Mean: Without OCM 11.6 \pm 3.1 With OCM 11.8 \pm 3.4	Mean: Without OCM -13.15 \pm 8.53 With OCM -13.47 \pm 7.44	Mean Preop: Without OCM 2.5 \pm 0.9 With OCM 2.6 \pm 0.8 Mean Postop: Without OCM 0.0 \pm 0.2 With OCM 0.2 \pm 0.8	Early hypotony 24% Choroidal detachment 14% Needling not recorded Reoperation 8% (1 case no OCM, 3 cases OCM)	0.2 mg/ml for 3 minutes	Success (IOP ≤ 21 mmHg): Without OCM CS 68% QS 92% With OCM CS 58.3% QS 95.8%

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