

Consensual ophthalmotonic reaction in fellow eyes in the early postoperative period
following unilateral glaucoma surgery

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Table S1 Comparison of baseline characteristics of operated and fellow eyes among the four surgery groups.

Variables		Trabeculectomy (n = 123)	Bleb needling (n = 90)	Trabectome (n = 106)	MA T (n = 37)	P
Operated eye	LogMAR VA	0.7 (0.7)	0.8 (0.8)	-	0.6 (0.6)	0.420
	Vertical CDR	0.7 (0.2)	0.8 (0.2)	-	0.8 (0.1)	0.091
	IOP (mm Hg)	31.8 (11.9)	31.6 (10.6)	21.5 (8.2)	24.3 (8.1)	<0.001
	Number of preoperative IOP-lowering medications	2.5 (1.0)	2.3 (1.1)	2.1 (1.0)	2.6 (0.7)	0.009
	Previous glaucoma surgery	No	108 (87.8)	80 (75.5)	33 (89.2)	<0.001
		Yes	15 (12.2)	18 (17.0)	4 (10.8)	
	Lens status	Phakic	97 (78.9)	61 (67.8)	33 (89.2)	0.039
		Pseudophakia	24 (19.5)	18 (17.0)	3 (8.1)	
		Aphakic	1 (0.8)	3 (2.8)	1 (2.7)	
		POAG	49 (39.8)	85 (80.2)	29 (78.4)	<0.001
	Diagnosis	PACG	35 (28.5)	0 (0.0)	0 (0.0)	
		SOAG	13 (10.6)	18 (17.0)	5 (13.5)	
		SACG	7 (5.7)	0 (0.0)	0 (0.0)	
		JOAG	0 (0.0)	3 (2.8)	3 (8.1)	
		Glaucoma of Undetermined Etiology	3 (2.4)	0 (0.0)	0 (0.0)	

Fello w eye	LogMAR VA		0.5 (0.6)	0.8 (1.0)	-	0.4 (0.6)	0.2 07
	Vertical CDR		0.6 (0.2)	0.7 (0.3)	-	0.7 (0.2)	0.2 25
	IOP (mm Hg)		18.8 (8.7)	19.1 (7.2)	17.1 (6.3)	17.7 (4.6)	0.1 94
	Number of preoperative IOP- lowering medications		1.4 (1.4)	1.3 (1.3)	1.7 (1.2)	1.6 (1.3)	0.1 48
	Previous glaucoma surgery	No	95 (77.2)	46 (51.1)	76 (71.7)	26 (70. 3)	0.2 55
		Yes	28 (22.8)	24 (26.7)	22 (20.8)	11 (29. 7)	
	Lens status	Phakic	100 (81.3)	68 (75.6)	83 (78.3)	34 (91. 9)	0.1 62
		Pseudophakia	22 (17.9)	22 (24.4)	19 (17.9)	3 (8.1)	
	Diagnosis	POAG	50 (40.7)	50 (55.6)	85 (80.2)	29 (78. 4)	<0. 00 1
		PACG	35 (28.5)	15 (16.7)	0 (0.0)	0 (0.0)	
		SOAG	5 (4.1)	7 (7.8)	6 (5.7)	0 (0.0)	
		SACG	2 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	
		JOAG	0 (0.0)	2 (2.2)	2 (1.9)	3 (8.1)	
		Glaucoma of Undetermined Etiology	16 (13.0)	3 (3.3)	0 (0.0)	0 (0.0)	
		Healthy	15 (12.2)	13 (14.4)	13 (12.3)	5 (13. 5)	

MAT: microcatheter assisted trabeculectomy, VA: visual acuity, CDR: cup-disc ratio, IOP: intraocular pressure, POAG: primary open-angle glaucoma, PACG: primary angle-closure glaucoma; SOAG: secondary open-angle glaucoma, SACG: secondary angle-closure glaucoma; JOAG: juvenile onset primary open angle glaucoma

Table S2 Univariate analysis of COR in the fellow eye at POD1 following unilateral trabectome

Variables		Fellow eye without COR (n = 67)	Fellow eye with COR (n = 39)	<i>P</i>
Sex	Male	38 (56.7)	27 (69.2)	0.222
	Female	29 (43.3)	12 (30.8)	
Age (y)		49.4 ± 16.5	47.1 ± 17.6	0.510
Previous history of diabetes	No	56 (83.6)	32 (82.1)	1.000
	Yes	11 (16.4)	7 (17.9)	
Previous history of hypertension	No	61 (91.0)	34 (87.2)	0.528
	Yes	6 (9.0)	5 (12.8)	
Baseline IOP in the operated eye (mm Hg)		21.4 ± 8.2	21.8 ± 8.3	0.801
ΔIOP in the operated eye at POD1 (mm Hg)		-4.1 ± 9.7	-4.5 ± 8.6	0.566
Type of glaucoma in the fellow eye	Open-angle	64 (95.5)	29 (74.4)	0.004
	Healthy	3 (4.5)	10 (25.6)	
Lens status in the fellow eye	Phakic	55 (83.3)	28 (73.7)	0.133
	Pseudophakia	11 (16.7)	8 (21.1)	
	Aphakic	0 (0.0)	2 (5.3)	
Previous glaucoma surgery in the fellow eye	No	53 (85.5)	23 (63.9)	0.022
	Yes	9 (14.5)	13 (36.1)	
Number of preoperative topical IOP-lowering medications in the fellow eye		1.9 ± 1.1	1.3 ± 1.3	0.032
Preoperative topical IOP-lowering medications in the fellow eye				
Use of α₂-receptor agonists	No	45 (67.2)	24 (61.5)	0.673
	Yes	22 (32.8)	15 (38.5)	
Use of beta-blockers	No	45 (67.2)	34 (87.2)	0.036
	Yes	22 (32.8)	5 (12.8)	
Use of CAIs	No	43 (64.2)	27 (69.2)	0.673
	Yes	24 (35.8)	12 (30.8)	
Use of PGAs	No	33 (49.3)	23 (59.0)	0.420
	Yes	34 (50.7)	16 (41.0)	

COR: consensual ophthalmotonic reaction, IOP: Intraocular pressure, POD1: postoperative day 1, CAIs: carbonic anhydrase inhibitors, PGAs: prostaglandin analogues

Table S3 Multivariate logistic regression analysis of COR in the fellow eye at POD1 following trabectome

Variables	β Coefficient	SE	OR	95% CI		<i>P</i>
				Lower bound	Upper bound	
Previous glaucoma surgery in the fellow eye (Yes vs No)	1.30	0.53	3.65	1.30	10.73	0.015
Use of beta-blockers in the fellow eye (Yes vs No)	-0.83	0.66	0.44	0.11	1.55	0.212
Number of preoperative topical IOP-lowering medications in the fellow eye	0.12	0.26	1.13	0.68	1.91	0.645
Type of glaucoma in the fellow eye (Open-angle glaucoma vs Healthy eye)	-2.15	0.85	0.12	0.02	0.56	0.011

COR: consensual ophthalmotonic reaction, POD1: postoperative day 1, SE: standard error; OR: Odds Ratio, 95% CI: 95% Confidence Interval; IOP: intraocular pressure

Table S4 Univariate analysis of COR in the fellow eye at POD1 following unilateral MAT

Variables		Fellow eye without COR (n = 16)	Fellow eye with COR (n = 21)	<i>P</i>
Sex	Male	12 (75.0)	17 (81.0)	0.705
	Female	4 (25.0)	4 (19.0)	
Age (y)		45.6 ± 17.7	39.9 ± 19.5	0.580
Previous history of diabetes	No	14 (87.5)	18 (85.7)	1.000
	Yes	2 (12.5)	3 (14.3)	
Previous history of hypertension	No	14 (87.5)	20 (95.2)	0.568
	Yes	2 (12.5)	1 (4.8)	
Baseline IOP in the operated eye (mm Hg)		24.1 ± 7.7	24.4 ± 8.5	0.878
ΔIOP in the operated eye at POD1 (mm Hg)		-7.6 ± 9.1	-7.5 ± 13.5	0.878
Type of glaucoma in the fellow eye	Open-angle	14 (87.5)	18 (85.7)	1.000
	Healthy	2 (12.5)	3 (14.3)	
Lens status in the fellow eye	Phakic	14 (87.5)	20 (95.2)	0.568
	Pseudophakia	2 (12.5)	1 (4.8)	
Previous glaucoma surgery in the fellow eye	No	11 (68.8)	15 (71.4)	1.000
	Yes	5 (31.2)	6 (28.6)	
Number of preoperative topical IOP-lowering medications in the fellow eye		1.9 ± 1.3	1.4 ± 1.2	0.291
Preoperative topical IOP-lowering medications in the fellow eye				
Use of α₂-receptor agonists	No	13 (81.2)	21 (100.0)	0.072
	Yes	3 (18.8)	0 (0.0)	
Use of beta-blockers	No	8 (50.0)	12 (57.1)	0.746
	Yes	8 (50.0)	9 (42.9)	
Use of CAIs	No	9 (56.2)	13 (61.9)	0.749
	Yes	7 (43.8)	8 (38.1)	
Use of PGAs	No	5 (31.2)	10 (47.6)	0.500
	Yes	11 (68.8)	11 (52.4)	

COR: consensual ophthalmotonic reaction IOP: Intraocular pressure, POD1: postoperative day 1, MAT: microcatheter assisted trabeculectomy, CAIs: carbonic anhydrase inhibitors, PGAs: prostaglandin analogues

Figure S1 Absolute change of IOP (Δ IOP) in the operated and fellow eye at POD1 in four glaucoma surgery groups. (a) Δ IOP in the operated eye. (b) Δ IOP in the fellow eye. The center line represents the median, the box boundaries represent the IQR, and the whiskers extend to $1.5 \times$ IQR. (IOP: intraocular pressure, POD1: postoperative day 1, IQR: Interquartile Range).

