

# Brinzolamide–brimonidine fixed combination for the prevention of intraocular pressure elevation after phacoemulsification

Georgakopoulos et al. *Eur J Ophthalmol* 2020;30(2):293-298

Intraocular pressure (IOP) may rise during the first 24 h after phacoemulsification cataract surgery, and is a common complication of uneventful phacoemulsification surgery



Post-operative increases in IOP mainly result from the use of ophthalmic viscosurgical devices (OVDs) during surgery

Acute post-surgical IOP increase:  
 - May lead to disease progression in patients with glaucoma  
 - Is a risk factor for postoperative anterior ischaemic optic neuropathy  
 - May cause pain and corneal oedema



Many surgeons prescribe antiglaucoma agents prophylactically to control post-op IOP

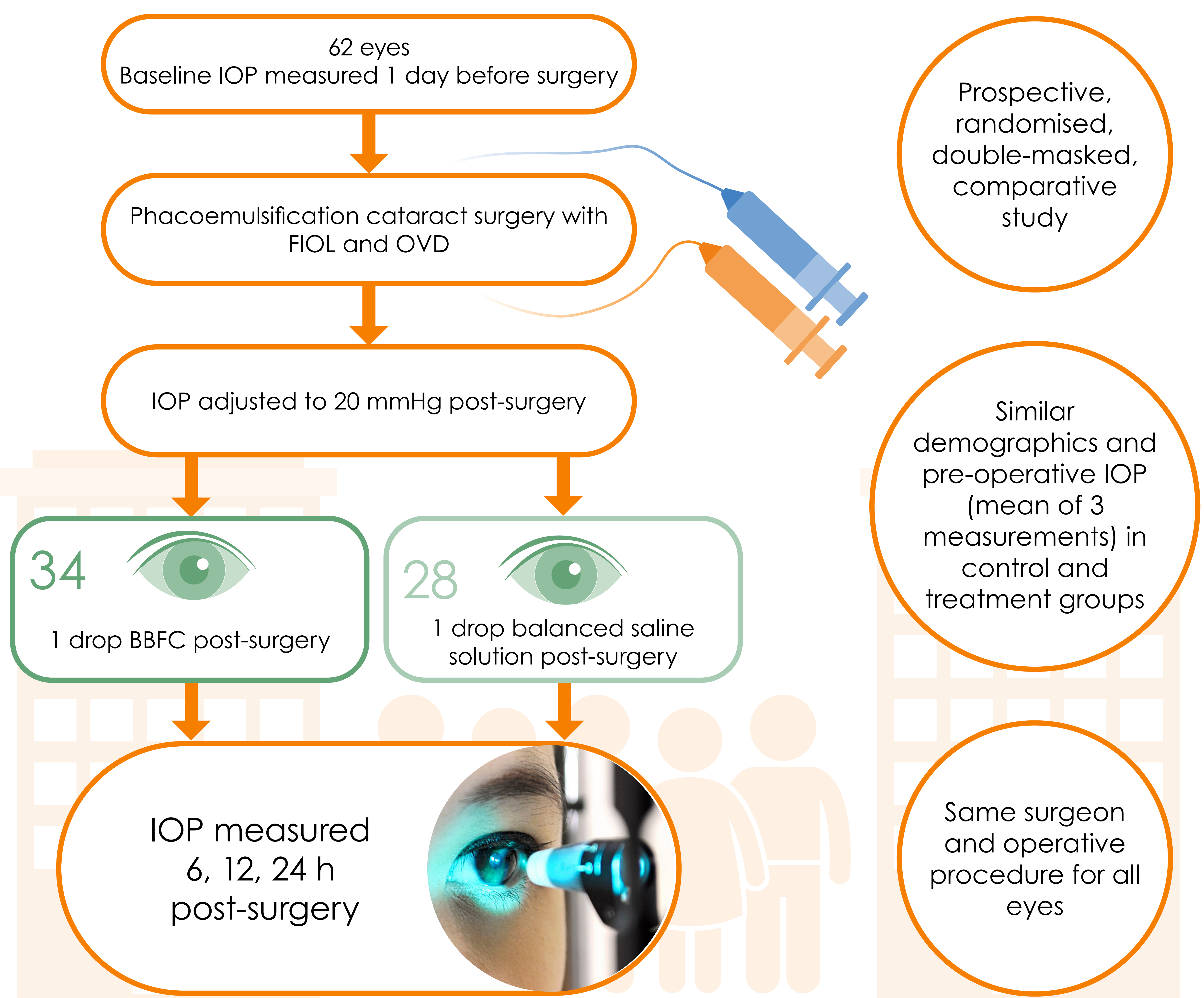
The first fixed combination anti-glaucoma drugs without a beta blocker that were recently approved in Europe contain:  
 - The carbonic anhydrase inhibitor brinzolamide (1%)  
 - The  $\alpha_2$  agonist brimonidine (0.2%)



Removal of a beta-blocker minimises the risk of cardiovascular and pulmonary side effects

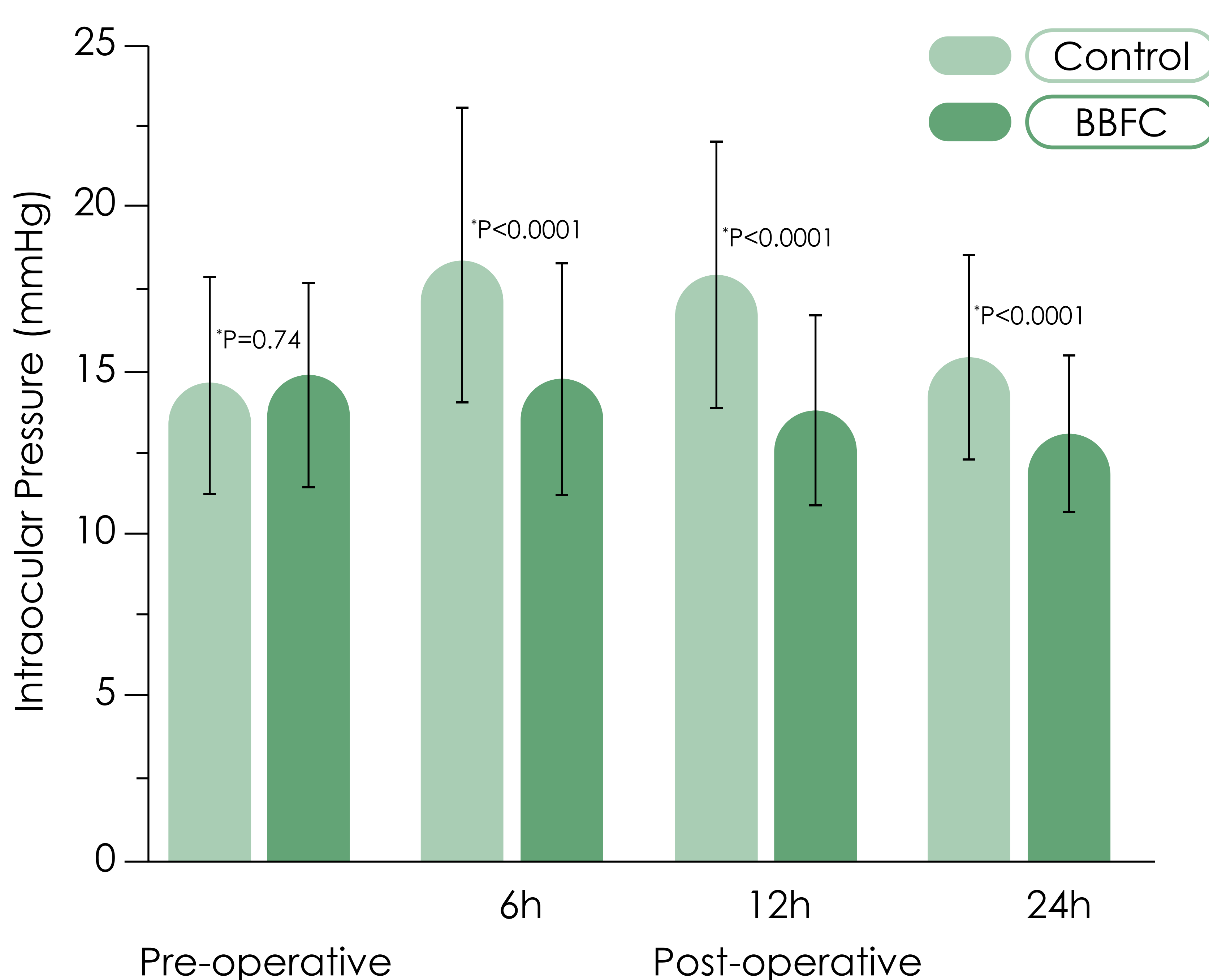
**Aim:** Evaluate the hypotensive effect of topical brinzolamide–brimonidine fixed combination (BBFC) on IOP during the first 24 h after uncomplicated phacoemulsification cataract surgery using OVDs

## Method



## Results

Mean IOP values higher in the control group than in BBFC group ( $P<0.0001$ ) at all time points post-surgery

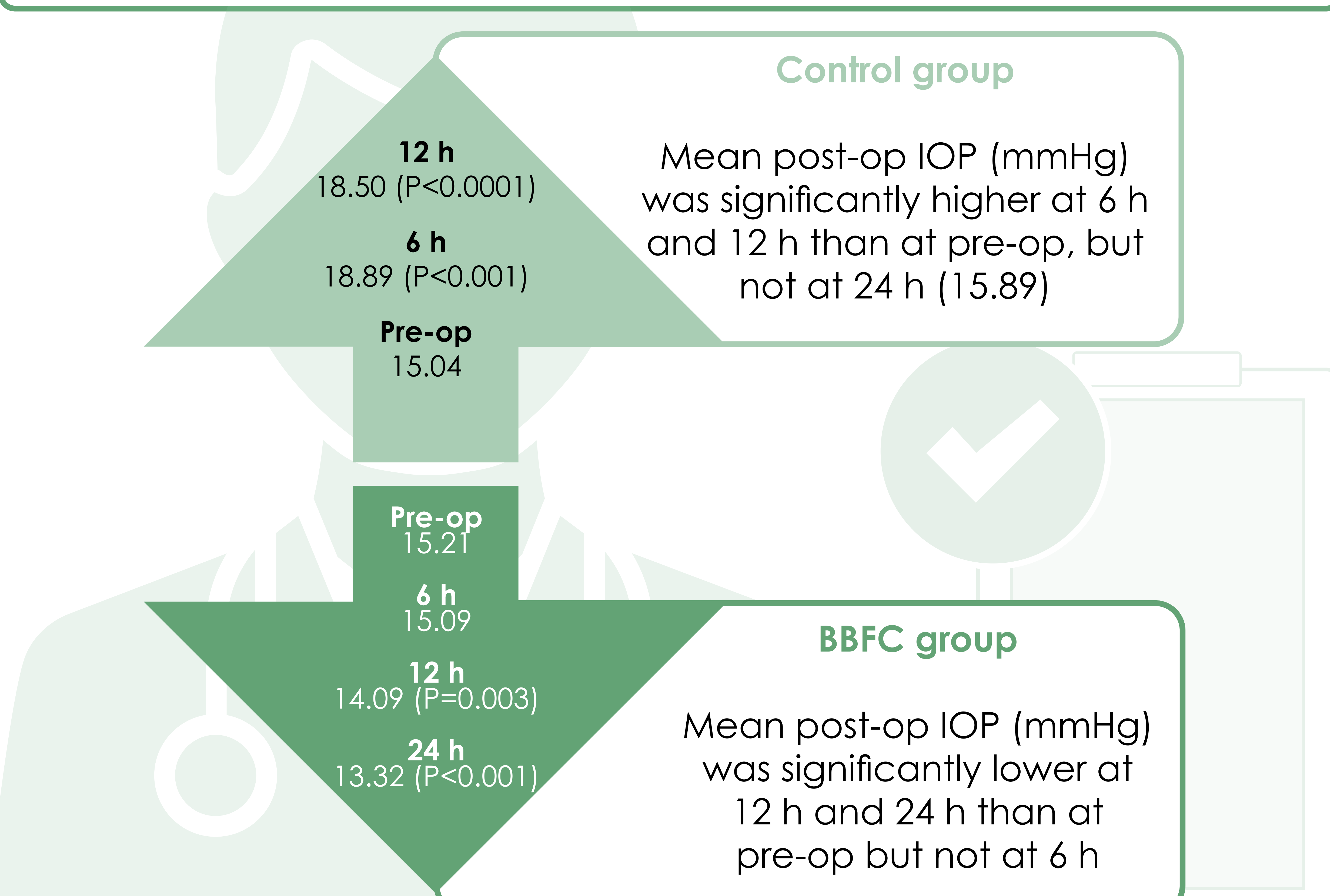


More of the eyes in the control group had an IOP increase of  $\geq 5$  mmHg post-surgery

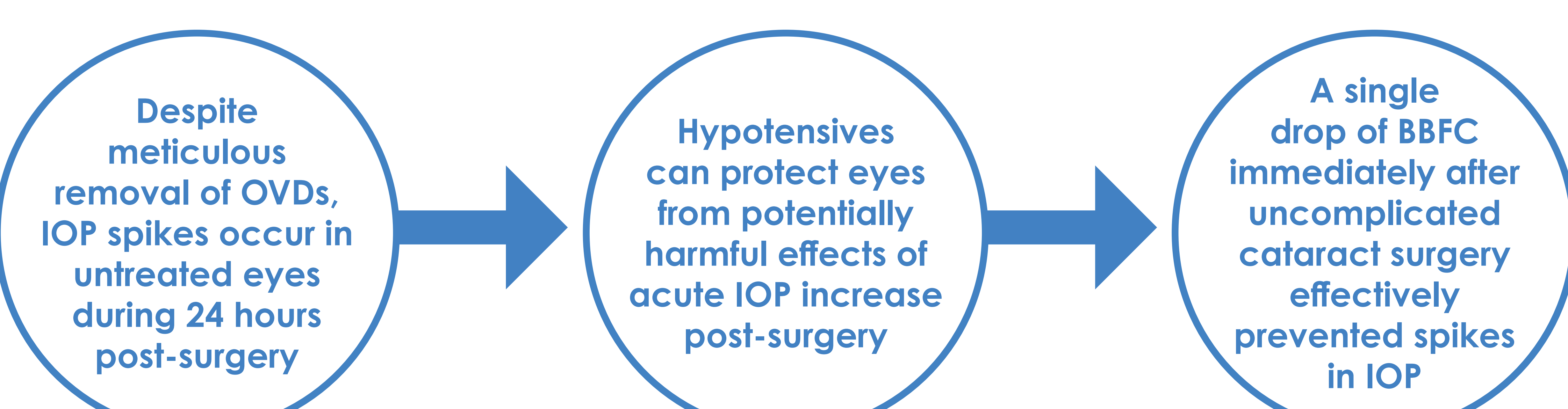
Time after surgery (h)	BBFC group n (%)	Control group n (%)
6	3 (8.8)	11 (32.4)*
12	0 (0)	11 (32.4)†
24	0 (0)	2 (5.9)‡

\*Chi-square test  $P=0.004$ ;  
 †Chi-square test  $P<0.0001$ ;  
 ‡Chi-square test  $P=0.11$

## Mean post-operative IOP in BBFC and control groups



## Takeaways



**Abbreviations:** BBFC, brinzolamide–brimonidine fixed combination; FIOI, foldable intraocular lens; IOP, intraocular pressure; OVD, ophthalmic viscosurgical device

**Reference:** Georgakopoulos CD, Kagkeliaris K, Pagoulatos D, Plotas P, Makri OE. Brinzolamide–brimonidine fixed combination for the prevention of intraocular pressure elevation after phacoemulsification. *European Journal of Ophthalmology*. 2020;30(2):293-298.

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