

## Introduction

Goniotome (NeoMedix, California) is a novel ab interno dual-blade device, with an irrigation and aspiration feature, for the lowering of intraocular pressure (IOP) by excision of trabecular meshwork.

The probe is connected to phacoemulsification machine irrigation and aspiration (I/A). It bears similarities to the Trabectome (NeoMedix, California), but delivers no energy, and so does not need investment in a power unit.

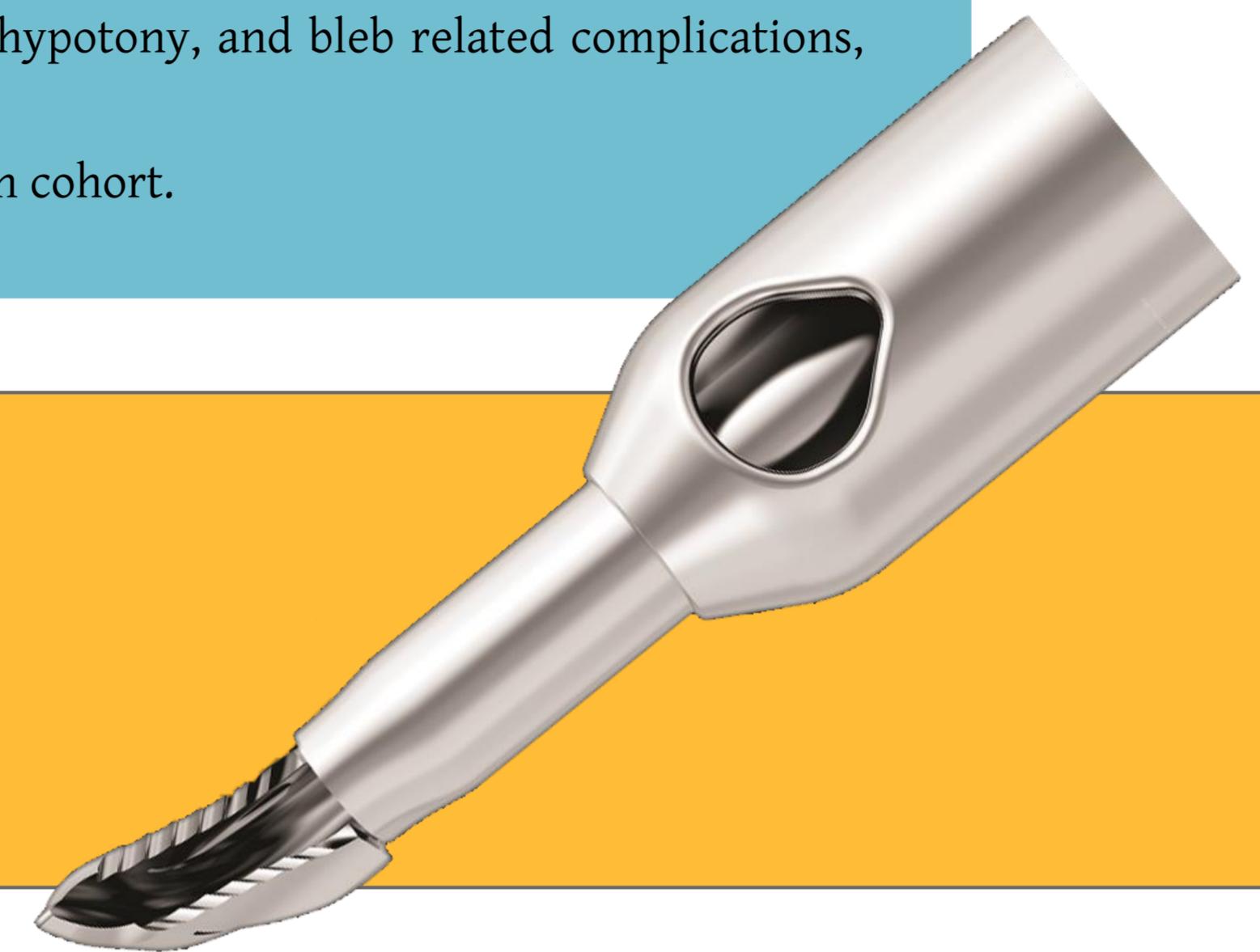
The absence of external filtration or bleb formation reduces risk of post-operative hypotony, and bleb related complications, including infection.

Having used the treatment for one year, we present the outcomes of the first European cohort.

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# Goniotome: First year outcomes



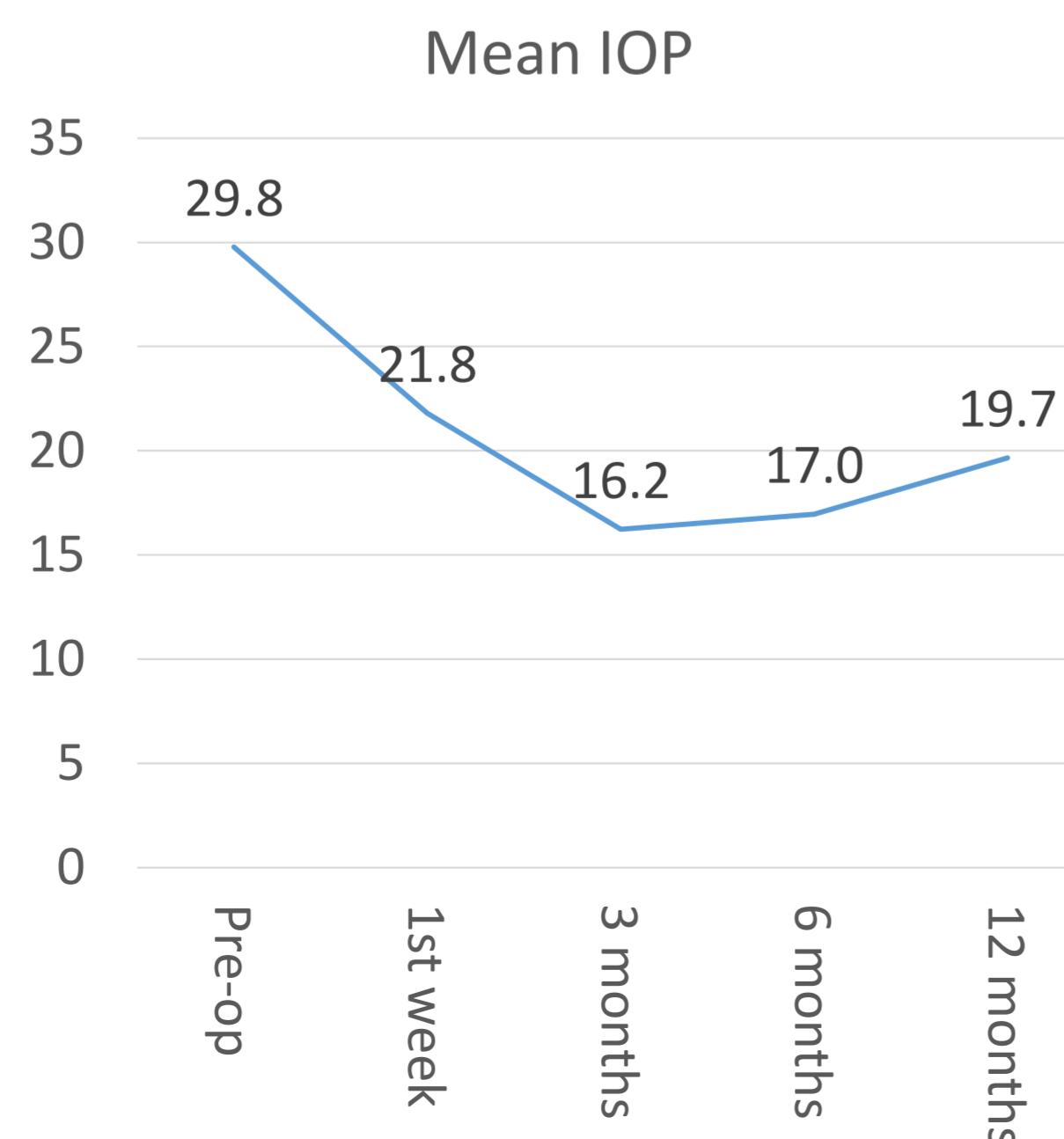
## Procedure



Images courtesy of NeoMedix graphics

← Surgical view of goniotome, used to excise  $120^\circ \pm 10^\circ$  of TM and inner wall of SC via a clear corneal incision, followed by phacoemulsification of cataract and IOL implantation.

Post-operative care: Continue pre-operative drops and short course of topical pilocarpine and topical steroid.



QR code to YouTube video on surgical steps of Goniotome.

## Results

29 eyes in 26 patients had been treated by July 2019. Mean follow up was 25 weeks (range 4-67). Mean pre-operative IOP was 30.6mmHg (standard deviation 6.6).

Mean IOP reduction was 12.3mmHg (SD 7.8) or 39% (SD 20%) reduction from baseline.

Mean number of medication classes reduced from 2.6 to 1.6.

19 eyes (66%) had IOP lowering greater than 30% and 5 eyes (17%) were medication free.

5 eyes (17%) had significantly raised post-operative IOP at the first post-operative visit, related to hyphaema. There were no cases of severe vision loss.

Two eyes (7%) subsequently required penetrating surgery.

Median post-operative unaided VA was 6/9.

## Significance

- Goniotome appears to be an effective treatment at lowering intraocular pressure.

### Mean reduction of 12mmHg (39%)

- No serious complications have arisen.
- As with Trabectome, it is easily combined with cataract surgery, achieving good VA outcomes. Linked to the phaco machine, I/A ensures good operative visualisation.