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# **EFFECT OF TRIAMCINOLONE INTRAVITREAL INJECTION IN PREVIOUSLY VITRECTOMIZED EYES**

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Intravitreal triamcinolone acetonide (IVTA) has been shown to improve visual acuity (VA) and reduce central macular thickness (CMT) in different pathologies

IVTA is associated with a low incidence of surgical complications but with some well-known side effects (increase in intraocular pressure, cataract development)

The recurrence of edema is related to the disappearance of triamcinolone from the vitreous: a mean elimination half-life of 18.6 days has been described and it was estimated that 4 mg of triamcinolone would last in the vitreous for approximately 3 months.

In theory, the half-life of this drug should be smaller in previously vitrectomized eyes due to the lack of the vitreous reservoir and a faster wash-out from the vitreous cavity.

## PURPOSE

To analyse the effect of IVTA on CMT in previously vitrectomized eyes.

## METHODS

Retrospective study, Hospital de Braga, Ophthalmology Department

Eyes with macular edema that had previously underwent 23G pars plana vitrectomy.

The following parameters were analyzed before and after IVTA:

- Best Corrected Visual Acuity (BCVA),
- Intra-ocular Pressure (IOP),
- Mean CMT using Optical Coherence Tomography (Cirrus HD-OCT Zeiss®).

We compared the change in mean CMT and its duration over time.

Statistical analysis were performed using paired-sample t-test.

## RESULTS

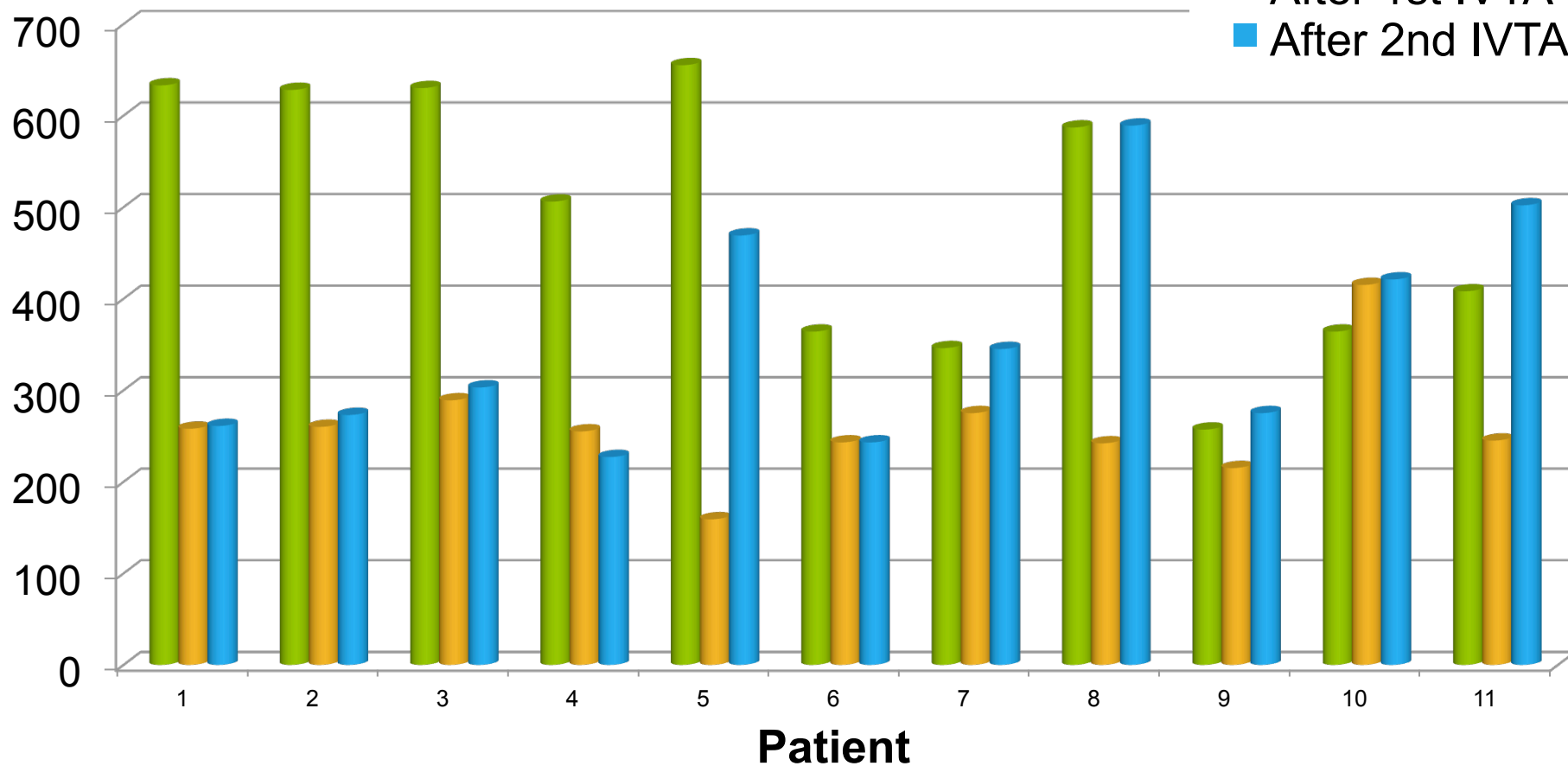
11 pseudophakic eyes of 9 patients were included as shown below.

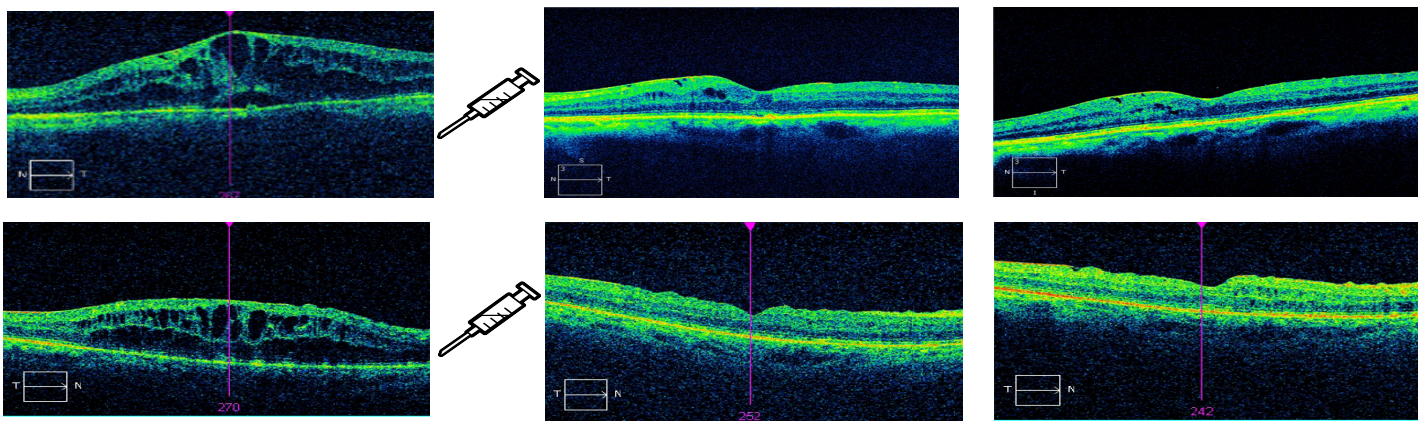
<b>Age (years)</b>	<i>Mean (±SD)</i>	68.2 (±8.65)
	<i>Range</i>	57-81
<b>Sex (n)</b>	<i>Male</i>	4
	<i>Female</i>	5
<b>Eye (n)</b>	<i>Right Eye</i>	6
	<i>Left Eye</i>	5
<b>Mean time between PPV and IVTA (months)</b>	<i>Mean (±SD)</i>	11.12 (±4.5)
	<i>Range</i>	2.3 – 14.8
<b>Cause</b>	<i>Diabetic Macular Edema</i>	9
	<i>Trauma</i>	1
	<i>Rhegmatogenous Retinal Detachment</i>	1



## CMT before and after IVTA per patient

- Before IVTA
- After 1st IVTA
- After 2nd IVTA





	Before IVTA	After IVTA	paired-sample t-test
Intraocular Pressure (mmHg)	16.45±2.58	19.85±3.34	0.0041
Visual Acuity (decimal scale)	0.22±0.17	0.28±0.19	0.1329
Central Macular Thickness	488.91±144.7	1 <sup>st</sup> IVTA: 228.64±170,79	0.0012
		2 <sup>nd</sup> IVTA: 355±121	0.0315 (vs. baseline)

CMT reduction lasted a mean ( $\pm$ SD) of 11.62 $\pm$ 3.46 weeks.

## CONCLUSIONS

Triamcinolone should be considered in the treatment of patients with persistent macular edema in vitrectomized eyes. CMT lowering effect of triamcinolone in vitrectomized eyes approached the time-range of 12 to 14 weeks usually seen in non-vitrectomized eyes.