

## Long-term Results of Primary Trabeculectomies and Molteno Implants for Primary Open-Angle Glaucoma

Molteno ACB, et al. Long-Term Results of Primary Trabeculectomies and Molteno Implants for Primary Open-Angle Glaucoma. 2011. Arch Ophthalmol; 129(11):1444-1450

### STUDY OVERVIEW

- Prospective case series comparing long-term efficacy outcomes of trabeculectomy and Molteno<sup>®</sup> implantation as primary surgical options in POAG patients.

Trabeculectomy	Molteno <sup>®</sup>	
718 eyes	260 eyes	Double-plate Molteno <sup>®</sup> [129 (50)]
500 patients	195 patients	Single-plate Molteno <sup>®</sup> [56 (22)]
		Molteno3 <sup>®</sup> 175 mm <sup>2</sup> [69 (27)]
		Molteno3 <sup>®</sup> 230 mm <sup>2</sup> [5 (2)]

### OUTCOME MEASURES

- IOP control was defined as an IOP of 14, 17, or 21 mmHg or less with or without hypotensive medication. Failure was defined as IOP greater than 14, 17, or 21mmHg, phthisis, repeated surgery, or total loss of vision due to early or late complications of trabeculectomy.
- Reduction in IOP control and medication use was similar in both groups.
- The failure rate was higher in the Trabeculectomy Group at 96 (13%) compared to the Molteno<sup>®</sup> Group at 8 (3%). (Note: failure was defined as IOP > 21 mmHg at the final follow-up.)
- The rate of loss of 2 or more lines of Snellen VA was higher in the Trabeculectomy Group at 8% (43 patients) compared to the Molteno<sup>®</sup> Group 5% (9 patients).

	Mean IOP (mmHg)			Mean Medication (n)		
	Baseline	10 Years	20 Years	Baseline	10 Years	20 Years
Molteno <sup>®</sup>	23.9	13.9	13.5	2.10	0.85	1.33
Trabeculectomy	23.8	14.9	14.7	1.94	0.96	0.80

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**INDICATIONS:** The Molteno3® is indicated to reduce intraocular pressure in neovascular glaucoma and glaucoma where medical and conventional surgical treatments have not been successful, to control the progression of disease.

**CONTRAINDICATIONS:** Patients with the following conditions may not be suitable candidates for the Molteno3®: 1. intraocular infection, 2. rheumatoid arthritis, scleritis and immune corneal melt syndromes, 3. Scleral Buckle.

**COMPLICATIONS:** Possible complications with the use of the Molteno3® include, but are not limited to: choroidal detachment, retinal detachment, expulsive haemorrhage, pupillary block, lenticulo-ciliary block, shallowing and flattening of the anterior chamber, intraocular infection, diplopia, loss of central vision, hypotony and corneal endothelial damage.

**ADVERSE EVENTS:** Possible adverse events with the use of the Molteno3® include, but are not limited to: corneal endothelial damage when the tube touches the corneal endothelium, breakdown of the tissues overlying the bleb, diplopia when the placement of the implant interferes with the action of the extraocular muscles, corneal decompensation, progression of lens opacities, cystoid macular oedema, retinal detachment and intraocular infection

**PRECAUTIONS:** Caution should be taken with supra-Tenon implantation; erosion of the conjunctiva is known to result from the raised edge of the oval pressure ridge (Molteno3® G-Series) of surgical techniques, proper use of the surgical instruments, and post-operative patient management are considerations essential to a successful outcome.

