

Modifications In Ahmed Glaucoma Valve Surgery

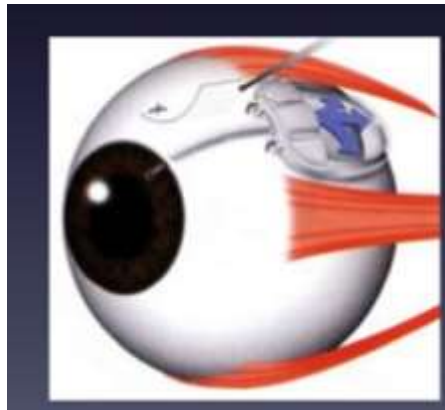
By

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- AGV is a shunt device that is used in refractory glaucoma either primarily or after the failure of conventional procedures. It directs aqueous flow through the silicone tube .



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Why Modificatons??????



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Hypotony

- AGV valve mechanism was designed with the aim of preventing postoperative hypotony, allowing for AH drainage when IOP (8–12 mmHg).
- Studies have demonstrated that the mechanism is effective in reducing, but not abolishing

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- **The reason** of persistent hypotony after AGV implantation is **not completely clear**.
- over-prime
- excessively manipulate the valve housing
- Ciliary body function may fail

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- The egress of aqueous around the AGV tube



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*IOP increase and excessive capsule
Fibrosis*

- An **“hypertensive” phase** after glaucoma drainage implantation is quite common and has been frequently described in patients with AGV.
- Typically, this phase peaks at **1 or 2 months** postoperatively and resolves within 6 months.

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IOP increase and excessive capsule fibrosis:

- The **primary reason** for elevated IOP in the postoperative period is from **capsular fibrosis**. Attempts have been made to modulate the fibrotic reaction around the plate, varying plate size, shape, flexibility, and materials.

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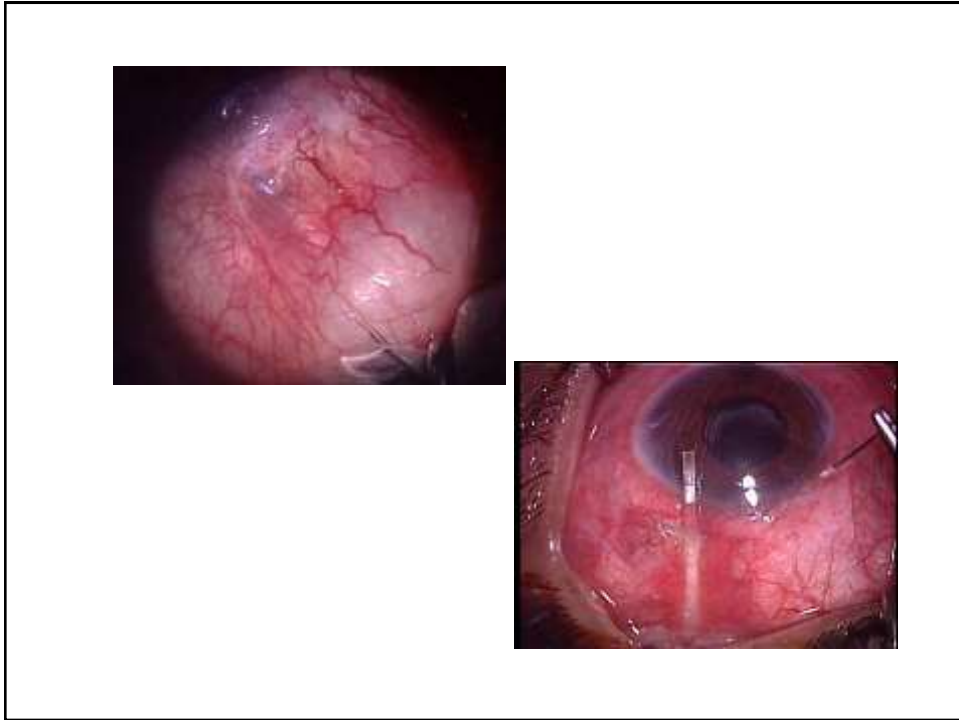
Tube Exposure

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- Tube **exposure** is a well-known complication of glaucoma drainage implants.

Erosion of the conjunctiva and of the covering patch graft has been described in the late postoperative period in **2%–7%** of eyes after implantation of glaucoma devices.

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Modifications In AGVS

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Modification

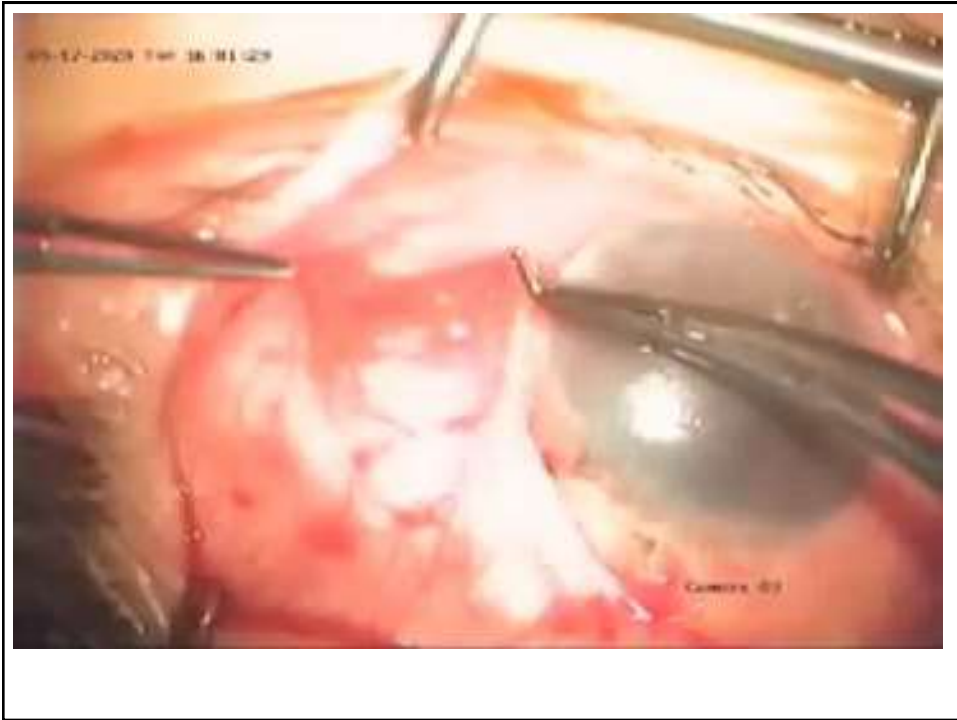
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Tenon Capsule Grafting

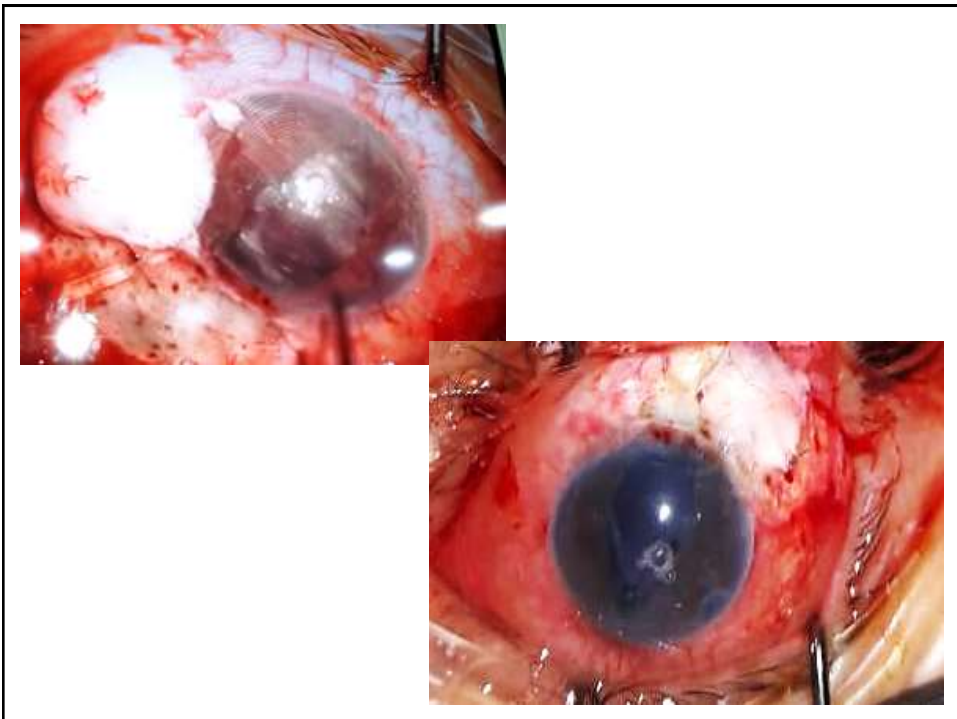
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- Partial intraoperative Tenon's capsule resection with the use of adjunctive of mitomycin C is effective in developing thin, avascular blebs in eyes undergoing Ahmed glaucoma valve insertion .

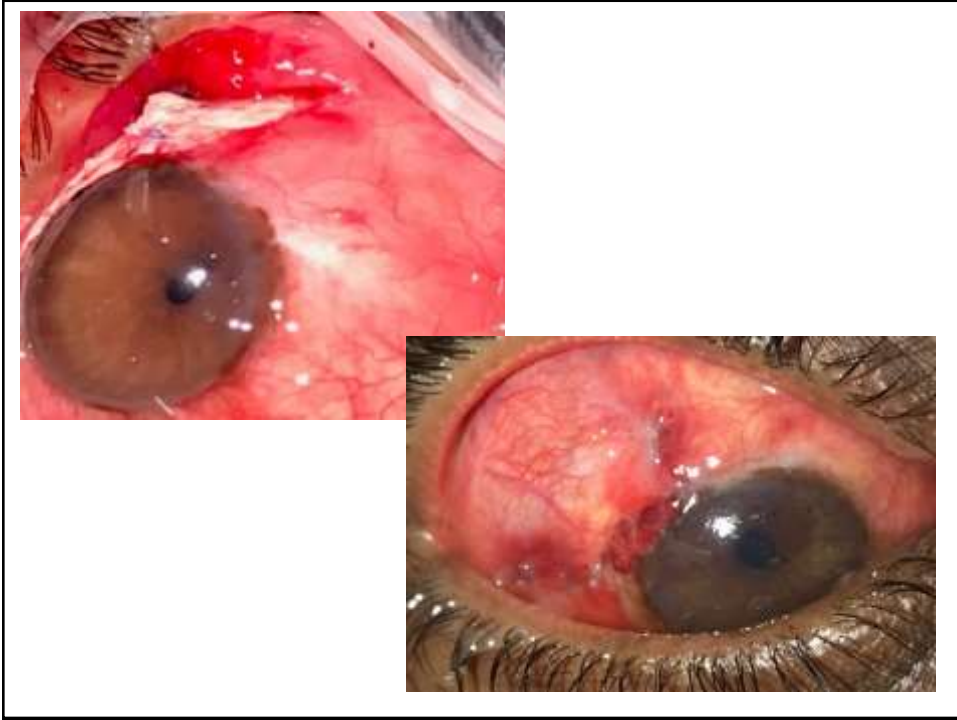
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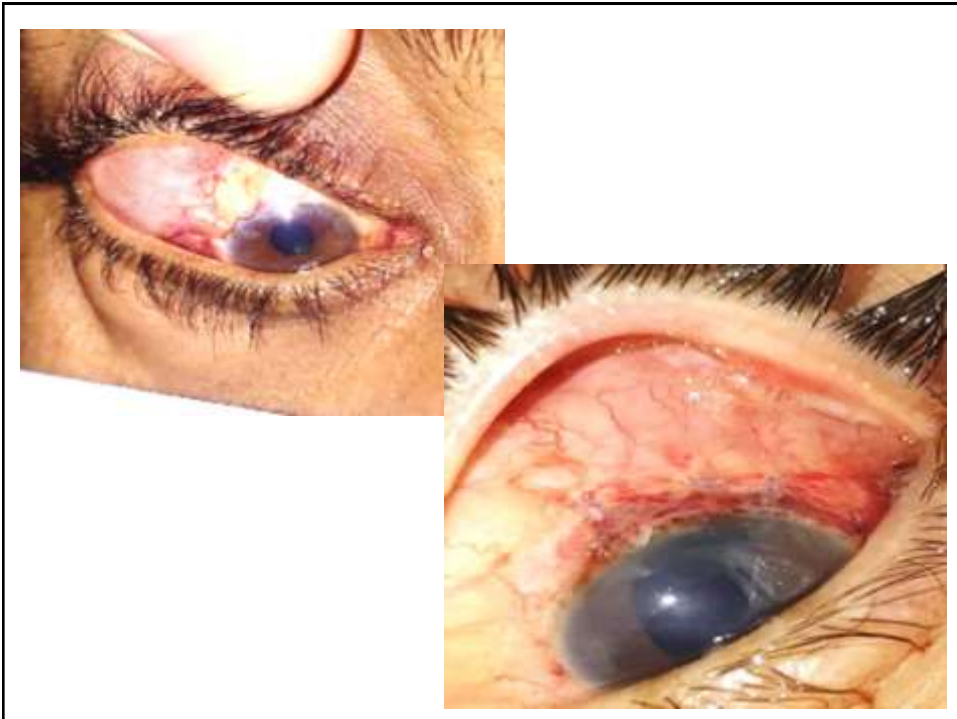
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Research Article 2020

Tenon Capsule Grafting versus Autologous Scleral Graft in Ahmed Glaucoma Valve Surgery

Faried M. Wagdy

Journal of Ophthalmology

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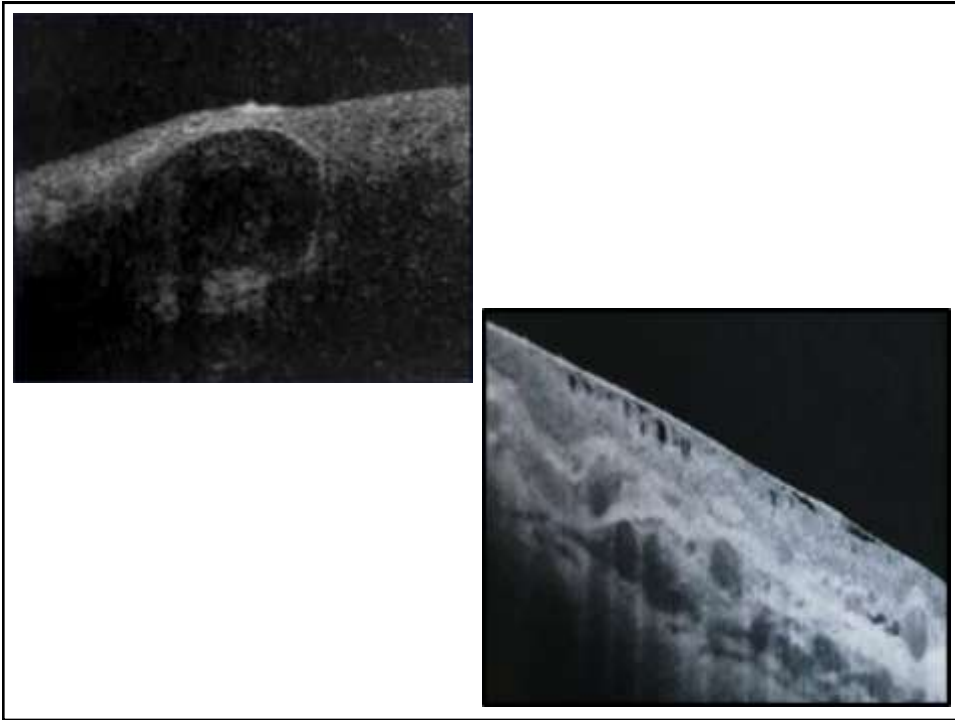
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Volume 2020 *Journal of Ophthalmology*

Bleb Morphology Using Anterior-Segment Optical Coherence Tomography after Ahmed Glaucoma Valve Surgery with Tenon Capsule Resection

Faried M. Wagdy¹

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- **Intraluminal Stenting**
- **External Ligation**

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- **Effect of Early Treatment with Aqueous Suppressants on Ahmed Glaucoma Valve Implantation Outcomes**

- *Mohammad Pakravan, Shahram Salehi Rad, Shahin Yazdani , Elham Ghahari , September 2014, [Ophthalmology](#) 121(9)*

- **Conclusions Early aqueous suppressant treatment may improve AGV implantation outcomes in terms of IOP reduction, success rate, and hypertensive phase frequency**

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	Group I Mean \pm SD	Group II Mean \pm SD	T.test	P.value
	Group I Mean \pm SD	Group II Mean \pm SD	T.test	P.value
Preoperative IOP	32.7 \pm 1.9	33.2 \pm 2.2	0.619	0.54
Postoperative IOP after 1 day	10.07 \pm 1.8	12.67 \pm 5.67	1.688	0.103
Postoperative IOP after 1 week	11.067 \pm 1.53	12 \pm 5.64	0.618	0.542
Postoperative IOP after 1 month	11.33 \pm 0.72	14.13 \pm 3.6	2.951	0.006
Postoperative IOP after 6 month	11.67 \pm 0.72	14.2 \pm 4.12	2.43	0.027
Postoperative IOP after 1 year	11.67 \pm 0.899	14.2 \pm 4.00	2.39	0.024

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	Group 1				Group 2				Fisher's Exact Test	p.value
	Yes		No		Yes		No			
	No	%	No	%	No	%	No	%		
Hypotony	1	6.67	14	93.3	2	13.33	13	86.67	1.34	0.210
Hyphema	1	6.67	14	93.3	4	26.67	11	93.3	0.912	1
Tube Occlusion	0	0	15	100	2	13.33	13	86.67	2.92	0.483
Choroidal Detachment	0	0	15	100	1	6.67	14	93.3	1.42	0.233
Increased IOP	1	6.67	14	93.3	2	13.33	13	86.67	1.34	0.210

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