



**KASR ALAINY**  
CAIRO UNIVERSITY - FACULTY OF MEDICINE

## Digital Ocular Massage

Shaymaa Hassan Salah  
MD Kasr Alainy

## ODM

- The goal of glaucoma filtering surgery is the creation and maintenance of a nonhealing fistula between two anatomic spaces that are not normally connected<sup>(1)</sup>
- The bleb and its surrounding tissues form the filtration pathway which is a **DYNAMIC system**.

Glaucoma Filtration Procedure  
(Trabeculectomy)



## DOM

- Successful blebs share common characteristics (elevation, avascularity).
- Initial bleb survival is aided when aqueous flow maintains sufficient tissue pressure to collapse conjunctival and Tenon's blood vessels.
- Blebs have wide range of appearance in terms of height, size, and wall-thickness.

## DOM

- Despite the introduction of potent inhibitors of fibroblastic proliferation nearly the single most common cause of the filtering bleb's failure in trabeculectomies remains the proliferation of fibroblasts in the Tenon's capsule <sup>(2)</sup> resulting in scarring and shrinkage of the filtering bleb.
- **Early recognition of signs of failure (within 2 weeks)** is the key to adjusting treatment.

## ODM

- In order to choose the right interventions for a failing bleb, it is helpful to recall the phases of wound healing.



## DOM

To determine if a bleb has failed, the surgeon first must

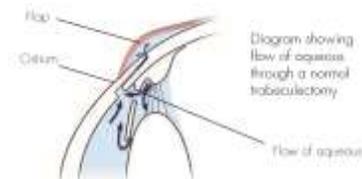
- Depth of the anterior chamber.
- Appearance of Bleb.
- Gonioscopic appearance of internal ostium.

**Response to digital pressure to the globe.**

## DOM

- In early phases, if your bleb is flat, no internal blockage is present and anterior chamber is deep, the simplest way is to use the digital ocular massage.
- We do this even in low teens pressure.

## DOM



- The purpose of ODM is to **improve aqueous** flow through the surgical site thus **enlarging the filtration bleb, reducing IOP** and **inhibiting scar** formation from obstructing the filtration pathway.

## DOM

- Massage technique:

1- Patient is asked to look up.

2- place a finger on lower lid (180 degree away from trabeculectomy) and elevate the lid so that it covers the lower part of the globe.



## DOM

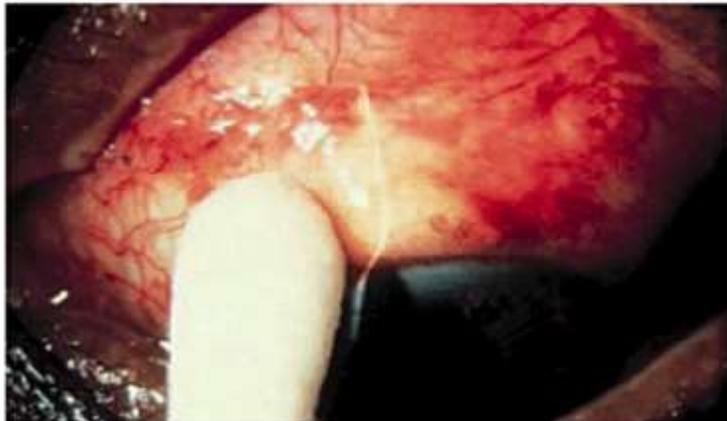
- 3- Pressure is to be applied on the globe with enough force but not so much as to cause discomfort or pain.
- 4- Pressure is supposed to be steady and firm and has to be applied in the patterns of 10 seconds of pressure, 5 seconds of rest, and 10 seconds of pressure. Patients are advised to perform massage 3-4 times daily.

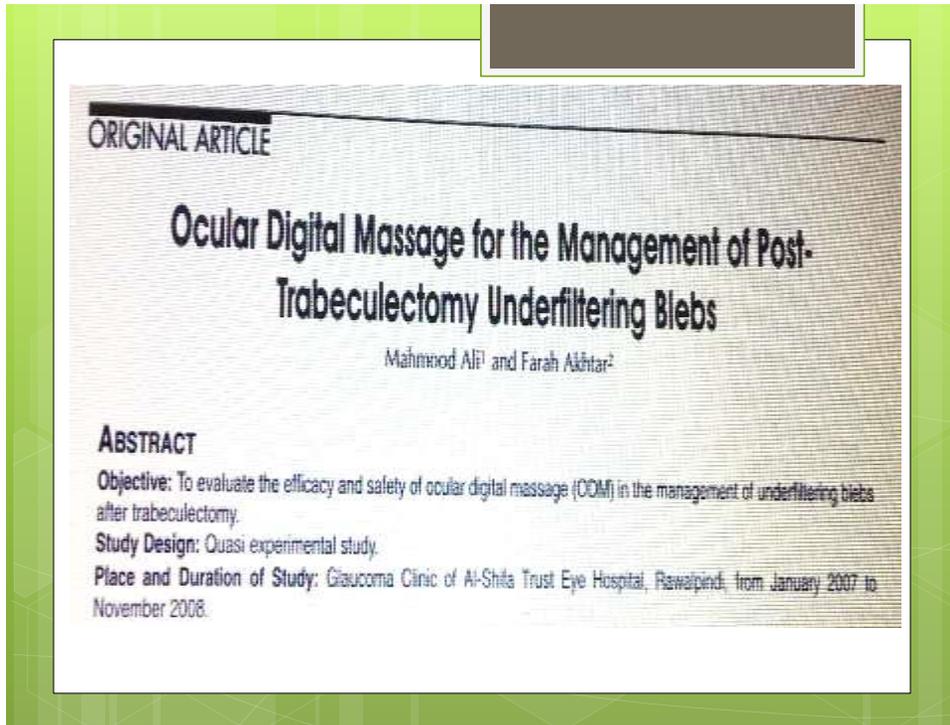


## Complications

- Because of some possible corneal abrasions, hypotony, flat anterior chamber, hyphema, iris incarceration into the sclerostomy, and choroidal effusion or hemorrhage, **ocular massage is suitable for patients who are physically capable of performing it and who had a beneficial response to the initial massage by the physician.**

***Focal compression with a moistened cotton tip applicator at the edge of the scleral flap (described by Carlo Traverso, MD) can increase outflow and reduce***





- The study in **2011** evaluated the results of ODM in the **early** postoperative period only. There have been conflicting reports regarding the efficacy of ODM, if ODM is started at a later stage after surgery.
- **Henderer et al 2001**, reported little to no success in the long-term management of increased IOP if ocular compression was done in the late postoperative period. On the other hand **Kane et al 1997**, reported a substantial, transient decrease of IOP after ODM in glaucomatous eyes 3 months to 6 years after initial successful filtering surgery

## Ocular massage for intraocular pressure control after Ahmed valve insertion

Ian McClraith,\* MD; Yvonne Buys,\* MD; Robert J. Campbell,\* MD; Graham E. Trope,\* MB, PhD

### ABSTRACT • RÉSUMÉ

**Background:** To investigate the immediate and longer-term effect of ocular massage on intraocular pressure (IOP) after Ahmed valve insertion.

**Methods:** A retrospective chart review was undertaken of the effects of ocular massage in patients with inadequately controlled IOP after Ahmed valve surgery. During a 20-month period between January 2004 and August 2005, 20 of 52 patients underwent a course of ocular massage. They were compared on IOP and the number of ocular hypotensive medications required with the 32 patients whose IOP was satisfactory after surgery.

A significant reduction in IOP after ocular massage in eyes with Ahmeds Glaucoma valve (AGV) implant. The IOP was immediately reduced by 40% from 19.2 mm Hg to 11.6 mm Hg ( $p < 0.001$ ) and there was no significant difference regarding the final absolute IOP reduction between the massage and control group, ( $p = 0.8$ ).

## Take home message

- ODM is an effective method of controlling the IOP after trabeculectomy, and thus contributes to long-term surgical success with an acceptable risk / benefit ratio.
- It should be considered before more aggressive surgical interventions and additional medical therapy are initiated.

