

## Use of a Desmarres Retractor for Upper Lid and Lash Isolation During Intravitreal Injections

The injection of substances into the vitreous cavity has become one of the most common procedures in the United States.<sup>1</sup> Although rare, endophthalmitis is the most visually devastating complication. Multiple maneuvers have been suggested and implemented to decrease its incidence. One of the most common is the use of a bladed lid speculum to isolate the patient's lids and lashes from the needle and injection site. Reviewing the VISION study, Gragoudas et al<sup>2</sup> attributed many of the infections in the VISION study to not using a lid speculum. A survey in 2010 reported that 92% of retinal surgeons use specula with their intravitreal injections.<sup>3</sup> Unfortunately, the insertion of the speculum is regarded as one of the most uncomfortable portions of the procedure<sup>4</sup> and leaves the ocular surface unprotected by the eyelids while the speculum is in place. Intuitively, this exposure could create discomfort from dryness and epithelial breakdown after injection. The following describes a new intravitreal injection technique using a Desmarres lid retractor, and the author's experience thus far. These retractors are inexpensive, simple to sterilize, durable, and easy to locate for purchase. They isolate the patient's lids and lashes from the needle and injection site, hypothetically limit meibum expression by reducing transverse transcutaneous pressure across meibomian glands, minimize the amount of ocular surface exposure time, and do not cause the medial and lateral canthal stretching, as is seen with a lid speculum.

### Technique

The patient is placed in a supine recumbent position upon a tilting examination chair. The conjunctiva is first anesthetized with topical proparacaine 0.5% drops followed with topical lidocaine 4% drops. The patient's periorbital and ocular surface are cleansed with betadine 5% using sterile technique. With the surgeon standing at the head of the chair, the patient is asked to look

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The author has no financial/conflicting interests to disclose.

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**Fig. 1.** The patient looks downward and the Desmarres lid retractor is inserted under the upper lid.



**Fig. 2.** The upper lid is retracted with the Desmarres lid retractor to expose the injection site.

C  
O  
L  
O  
R

C  
O  
L  
O  
R

C  
O  
L  
O  
R

**Fig. 3.** With the upper eyelid retracted, the intravitreal injection needle is placed at the pars plana without the risk of touching lids or lashes.

C  
O  
L  
O  
R

**Fig. 4.** The intravitreal injection is administered with the patient's lids and lashes isolated from the injection site with the Desmarres retractor.

down, and the Desmarres retractor is placed under the margin of the superior lid (Figures 1 and 2). The lid is then elevated, exposing the superior bulbar conjunctiva (Figure 3). The intravitreal injection is placed 3.75 mm posterior to the limbus and the needle withdrawn (Figure 4). The retractor is removed, and the patient's ocular surface is washed with a sterile rinse.

The author has now performed this technique on 200 consecutive eyes. No cases of endophthalmitis or corneal erosions have been reported. Patients surveyed consistently report no discomfort from the retractor.

### Discussion

Desmarres lid retractors can be comfortably, safely, and easily used to isolate a patient's eyelid and lashes from the injection site during intravitreal injections. These retractors are inexpensive, simple to sterilize, durable, and easy to locate for purchase. Compared with conventional lid specula, Desmarres lid retractors minimize the amount of ocular surface exposure time and do not cause medial and lateral canthal stretching.

Future considerations could include disposable retractors to minimize the need for resterilization. The retractor could also be reconfigured to lessen the amount of material that inserts under the lid.

**Key words:** Desmarres, Desmarres retractor, intravitreal injection, speculum, lid speculum, eyelid speculum.

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### References

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