

To conclude, this report again proves that silicone oil is not an inert substance and can cause chronic inflammatory tissue reaction.<sup>3</sup> Careful closure of sclerotomies, copious irrigation of subconjunctival and sub-Tenon's spaces before closure of conjunctiva, and control of IOP in the postoperative period may help to reduce the incidence of this complication to a great extent.

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#### References

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2. Biswas J, Bhende PS, Gopal L, et al. Subconjunctival cysts following silicone oil injection: a clinicopathological study of five cases. *Indian J Ophthalmol* 1999;47:177–80.
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#### Author reply

Dear Editor:

We appreciate Dr Bhende et al's interest in and comments on our article and acknowledge the contribution made by Biswas et al<sup>1</sup> in highlighting this rare anterior segment complication of intravitreal silicone oil. We did come across their work during the preparation of our article but chose not to cite their work, as the clinical presentations of our 2 cases differed from the ones described by them. They reported 5 patients who presented with subconjunctival globules of silicone oil during routine postoperative examination, and these globules, along with surrounding subconjunctival tissue, were removed as part of an elective procedure for silicone oil removal. None of the patients in their series had an acute inflammatory response secondary to silicone oil in the subconjunctival space.

In our series,<sup>2</sup> patient 1 presented 4 weeks postoperatively with an acutely inflamed episcleral nodule adjacent to the superotemporal sclerostomy site. Her main symptoms were pain and redness, and she noted a nodule in the "upper corner" of her eye. She did have increased intraocular pressure (IOP), which may have contributed to the leakage of oil, as rightly pointed out by Bhende et al. However, patient 2 in our report did not have a documented increase in IOP. It is likely that the retinal incarceration may have contributed to a leaky sclerostomy wound, leading to leakage of silicone oil.

Both of these articles<sup>1,2</sup> demonstrate that silicone oil leakage through the sclerostomy sites may occur during the postoperative period. Increased IOP and improper sclerostomy closure may lead to this complication. Silicone oil in the subconjunctival space can either produce an acute inflammatory response, producing episcleral nodules, or present as clinically asymptomatic subconjunctival cysts.

We thank Dr Bhende et al for bringing the reader's

attention to this important anterior segment complication of silicone oil.

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1. Biswas J, Bhende PS, Gopal L, et al. Subconjunctival cysts following silicone oil injection: a clinicopathological study of five cases. *Indian J Ophthalmol* 1999;47:177–80.
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#### Adhesion Abnormalities Associated with LASIK

Dear Editor:

In Dr Kenyon et al's recent article,<sup>1</sup> the authors state that "aside from a single report and an unpublished study (Belin M. Experience with the Moria LSK One single-use microkeratome. Presented at: American Society of Cataract & Refractive Surgery [ASCRS] Annual Meeting, May, 2001; San Diego), current reviews and texts make only limited reference to the problem." The authors apparently missed my article from 2 years ago,<sup>2</sup> which was also presented at an earlier ASCRS session (Bashour M. Risk factors for epithelial erosions in LASIK. Paper presented at: ASCRS Annual Meeting, April, 2000; San Diego, California).

Whereas Kenyon et al looked at 500 consecutive LASIK procedures, we looked at 1852. We utilized the Bausch and Lomb (Rochester, NY) Hansatome with a superior hinge, versus Kenyon et al's Moria LSK One microkeratome with a nasal hinge (Moria, Inc., Antony, France). Our study, which had an incidence of 14% epithelial erosion (similar to those found by Kenyon et al [10.2%] and Belin et al [10.1%]), looked at numerous potential risk factors for epithelial erosions. "In patients with FST I or II [Fitzpatrick Skin Type (rated I–VI, where a rating of I or II indicates very pale to pale skin that burns easily)] or LES 1 or 2 [Lancer Ethnicity Scale,<sup>3</sup> which looks at ethnic background, where ratings of 1 or 2 indicate backgrounds associated with pale skin colors, such as Northern European], the relative risk of an epithelial defect was 10 times greater than in other patients; in those older than 40 years, it was 6 times greater than in other patients; in those with lighter hair or eye color, it was 2 to 3 times greater than in patients with darker hair or eyes. There was no significant difference in pachymetry, vertical or horizontal keratometry, or Schirmer readings between eyes with epithelial defects and eyes without."<sup>2</sup> We also noted that there was an increasing risk of epithelial erosion the thicker the flap cut by the microkeratome.

We hypothesized that many patients with no clinical evidence of corneal pathology (including epithelial basement membrane dystrophy) have an occult form of epithelial fragility similar to epithelial basement membrane dystrophy, and we proposed a model for epithelial erosions in which ultraviolet light is the main cause of this epithelial

fragility and suggested that future investigators look at histopathology to help confirm our model.

Kenyon et al analyzed the histopathology of patients with increased epithelial fragility (7 eyes from an unknown number of patients). What they found was that patients with increased epithelial fragility have an abnormal morphology of the epithelial adhesion complex identical to that of epithelial basement membrane dystrophy or diabetes mellitus. Unfortunately, Kenyon et al did not state the FST of these patients or look at the histology of corneal epithelium from control patients with high FST scores to help assess whether ultraviolet light is the main cause of occult compromise of the epithelial basement membrane.

Of note, since the adoption of the Zero Compression Hansatome technology from Bausch and Lomb our incidence of epithelial erosions has dropped from 14% to only 0.1% (in 20 000 consecutive cases). Clearly, the microkeratome type and design and the flap thickness cut are the most important determinants of the incidence of epithelial erosions.

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#### References

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2. Bashour M. Risk factors for epithelial erosions in laser in situ keratomileusis. *J Cataract Refract Surg* 2002;28:1780-8.
3. Lancer HA. Lancer Ethnicity Scale (LES) [letter]. *Lasers Surg Med* 1998;22:9.

#### Author reply

Dear Editor:

We appreciate the comments of Dr Bashour concerning his own extensive experience with corneal epithelial defects associated with LASIK. Unfortunately, in conducting the literature search for our publication, his work did not come to our attention, and as we remained unaware in the course of our manuscript's review, this important reference regrettably was not cited.

It is of course interesting that both Dr Bashour and Dr Belin independently corroborated our observed incidence of epithelial defects at between 10% and 15%. Although neither Belin nor we noted any specific ocular or surgical risk factors (apart from the trend for thicker flaps to be associated with a higher epithelial defect rate), Bashour indeed makes the important observations of correlation with fair skin, hair, and eye color (which we did not test) and age over 40 years (which we did not observe). Indeed, as we observed ultrastructural abnormalities consistent with an occult and, hence, previously undescribed form of anterior basement membrane dystrophy, perhaps the missing link (age) could be hypothesized to comprise the dermatologic risk factors Bashour has identified. Whether ultraviolet light exposure constitutes an underlying mechanism is interesting but highly speculative.

Like Dr Bashour, we also believe that the microkeratome itself is clearly the responsible provocateur of epithelial

defects and, indeed, that alterations in technology or technique can greatly alter the incidence of the problem. Thus, although Bashour noted a remarkable decrease in epithelial defects with adoption of the Zero Compression Hansatome, we have found that while utilizing the same Mona LSK One microkeratome, release of the vacuum ring suction before the backstroke withdrawal of the microkeratome has reduced our incidence of epithelial defects to <1% in our most recent 2000 cases.

Finally, the additional clinically relevant observation of our study was the epithelial adhesion test, as there was a high correlation between the preoperative finding of a positive test (indicating loose epithelial-stromal adhesion) and the development of an intraoperative epithelial defect. We have adapted this test to determine the appropriate choice of LASIK versus photorefractive keratectomy in patients with biomicroscopically visible anterior basement membrane dystrophy, for whom LASIK has traditionally been held as contraindicated because of the high risk of epithelial dysadhesion. In particular, I have during the past 2 years completed uneventful LASIK (with respect to absence of intraoperative epithelial defects) in 5 patients with mild anterior basement membrane dystrophy for whom the preoperative adhesion test was negative (indicating normal epithelial-stromal adhesion).

Thus, as we progress by incremental mini-steps, it is apparent that the seemingly independent observations of Drs Bashour and Belin are altogether consistent with our own small advances. Although we regret not being aware of the former investigator's careful work, at least we can profess that we remained unbiased in our ignorance!

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#### The Australian Mohs Database

Dear Editor:

How is it possible for a noncomparative study<sup>1</sup> to determine that a treatment is the treatment of choice?

In declaring Mohs micrographic surgery to be the most appropriate procedure for periocular basal cell carcinoma, Malhotra et al did not include data regarding functional complications (e.g., lagophthalmos, chronic eye irritation, ectropion, cosmetic disfigurement). More significantly, the authors failed to compare Mohs micrographic surgery against excision with frozen-section control.

I commend Dr George Bartley for his restraint in the associated guest editorial,<sup>2</sup> and I question Dr Malhotra et al for their lack thereof.

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