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Sir,

Debris on processed ophthalmic instruments: a cause for concern

We read with interest the recently published article by Dinakaran,[1] raising concerns about the quality of processed ophthalmic instruments and the presence of foreign material on the surface of these instruments.

Despite close external inspection of the instruments prior to introduction into the eye, unwanted foreign material may still be retained within fine-bore instruments and enter the eye during surgery. Dinakaran's study[1] and our observation[2] do show that foreign debris may be introduced into the eye inadvertently. We have highlighted this issue, where unidentified foreign objects (UFOs) were observed in the clear corneal phacoemulsification wound.[2] Two types of UFOs, reflectile metallic looking (Figure 1, left) and fibrillary appearing (Figure 1, right), were mainly noted. However, no case of persistent intraocular inflammation associated with UFOs has been reported and the visual outcome remained unaffected in our patients.

Dunbar *et al*[3] have reported deposition of intraocular metallic fragments from the phacoemulsification probe. Debris (metallic and nonmetallic) from the microkeratomes, deposited at the corneal flap interface, has been reported after LASIK, which may be associated with diffuse lamellar keratitis.[4,5] The static forces and viscoelastic smeared instrument tips may attract the fibrillary material from the drapes used to cover the instrument trolley and the patient. Organic debris and cellular material deposited on the reusable ophthalmic instruments during phacoemulsification may interfere with the process of sterilization.[6] The long-term outcome of the UFOs in the eye is not clear. Transmission of variant Creutzfeldt–Jakob disease (vCJD) remains the major cause of concern in ophthalmic practice.[7] Conventional sterilization techniques fail to disinfect the agents of prion diseases. The risk of transmission of prions can be reduced by physically removing the traces of organic material from the instruments before the recommended decontamination process.[7]

It is advisable that microsurgical instruments are cleaned thoroughly and washed immediately at the end of each surgery by the theatre staff, before organic matter dries within and on the surfaces of the reusable instruments, and then despatched for sterilization. Further work is needed to examine the prevalence, composition, and surgical outcomes in patients with UFOs following intraocular surgery. Disposable instruments for intraocular surgery may be one solution in reducing the introduction of UFOs into the eye and this approach would reduce the risk of vCJD transmission.

Acknowledgements

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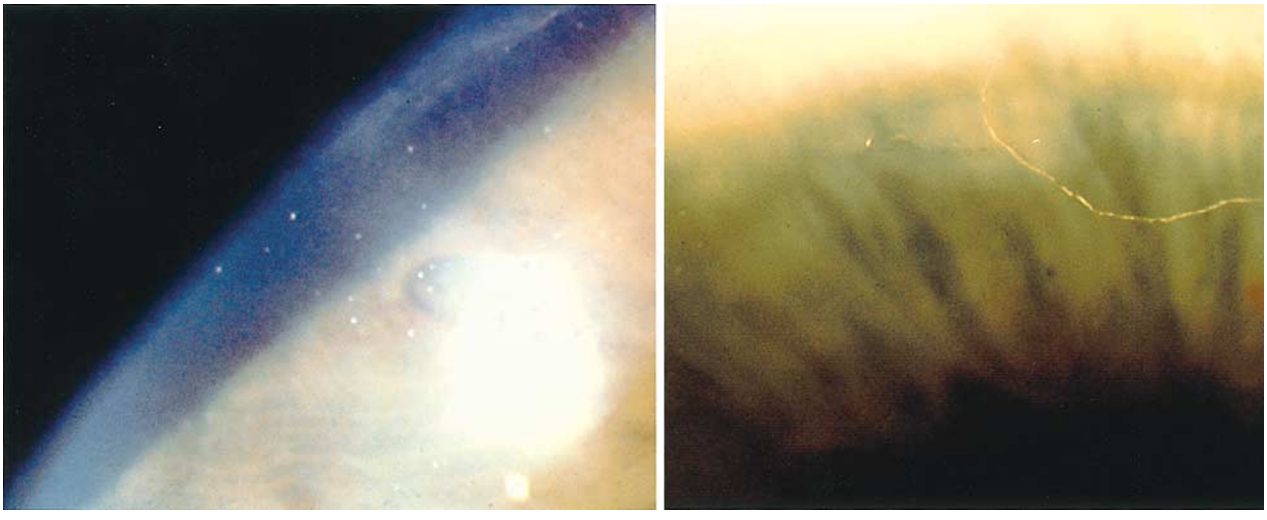

Figure 1 Reflectile (freckles) intrastromal UFOs in the corneal phacowound (left). Fibrillary appearing UFO extending from the corneal phacowound into the anterior chamber (right).

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Sir,

Reply: Debris on instruments

We appreciate the interest shown by authors Wadood and Dhillon in our article[1] on the presence of debris on processed ophthalmic instruments. They point out that debris may be retained within fine-bore instruments and go unrecognized. This is definitely a possibility. However, we were able to identify debris extruding from the aspiration channels in 6% of the irrigation and aspiration (I/A) hand pieces. We identified this by engaging the reflux mechanism of the foot pedal before putting the hand piece to use.

Wadood and Dhillon reinforce the various points that we discussed in our article. This further supports our findings and the recommendations made in our article. The summary of our recommendations include:

1. Inspection of instruments under the operating microscope to identify the presence of debris.
2. Checking the aspiration channel of the irrigation and aspiration hand pieces by engaging the reflux mechanism before entry into the eye.
3. Foldable lenses should be laid on fibre-free surfaces when folding. The sheets on the instrument trolley should be made of fibre-free material.
4. Viscoelastic substance from the tips of instruments, especially the intraocular lens introducers, should be removed by soaking the instruments in water and using a soft brush to clean the surfaces and the crevices. This is best carried out in the operating theatre immediately after the surgery, before the instruments are sent for sterilization.
5. Pressure syringing of the aspiration channels of the I/A hand pieces should be carried out at the end of the operation to remove the debris before they dry up.
6. Ultrasonic cleaning of ophthalmic instruments should be a routine to facilitate adequate removal of deposits from the surfaces of instruments.

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Sir,

Giant mucocoele masquerading as chronic unilateral conjunctivitis

Mucocoeles of the paranasal sinuses are relatively uncommon. They generally arise from either the ethmoid or frontal sinus, followed by the sphenoid and maxillary