

Importance of thorough cleaning of eye instruments

It is a well-known fact that contaminated eye instruments can cause eye inflammation that could result in the loss of sight. TASS, toxic anterior segment syndrome, is an acute severe inflammatory reaction to a toxic contaminant introduced into the anterior chamber during intraocular surgery.

Litigation

In 2017 it was announced that a private hospital group is being sued for the damages suffered by a patient who was allegedly operated on with non-sterile equipment. Beeld reports that Susanna Botha (64), a nurse, will be able to push ahead with her R2.6m claim for allegedly botched eye surgery following the Gauteng High Court (Pretoria) ruling. According to court papers, Botha suffered extensive visual impairment. Nicolaas Jacobus de Jager is claiming R5.5m after he lost his sight in his one eye. He is also alleging it was caused by non-sterile equipment. He underwent an eye operation on the same day, in the same hospital as Botha.

The small volume of the eye and its sensitivity to minute amounts of chemical or microbial contaminants means that improper instrument cleaning or sterilization practices might pose a significant risk to patients.

A practice that is under discussion, is the use of enzymatic detergents for decontaminating intraocular surgical instruments. The manufacturer's IFU for ophthalmic instruments and ultrasound cleaning baths often call for the use of enzymatic cleaners. Some ophthalmological surgeon's societies take the position that enzymatic detergents should not be routinely required for intraocular instruments. This is tricky as it contravenes what is said in the manufacturer's instructions for use. Ideally, we must follow manufacturer's instructions for use.

The recommendations

Cleaning

When using enzymatic detergents to clean eye instruments, the detergents must be used correctly. Always dilute in accordance with the MIFU. Do not mix eye instruments with other surgical instruments to prevent cross contamination. Rinse instruments

well after cleaning with either sterile, demineralised or distilled water.

Ultrasonic Cleaning

Some instrument manufactures recommend that eye instruments should be cleaned in an ultrasonic cleaner. It is best to have a separate ultrasonic cleaner for cleaning eye instruments only (a 10L bath is ideal for this purpose). Ensure that the ultrasonic cleaner's bath is clean before using it.

Remove as much debris as possible from the eye instruments before placing them in the ultrasonic cleaner. Use the correct dose of detergent in the ultrasonic cleaner. When loading the ultrasonic cleaner/bath, make sure the instruments don't touch each other. If an ultrasonic cleaner is used regularly, a 5-minute cycle should be adequate. Empty, clean, disinfect, rinse and dry the ultrasonic cleaner at least daily.

Rinsing

Eye instruments must be thoroughly rinsed to remove debris and detergent residues. The guidelines refer to using demineralised, distilled, or sterile water for rinsing.

References

<https://www.aao.org/clinical-statement/guidelines-cleaning-sterilization-intraocular>

<https://www.medicalbrief.co.za/archives/netcare-labile-damages-operating-non-sterile-equipment/>

KatenaCare: A guide to proper care and handling of Ophthalmic Surgical Instruments

