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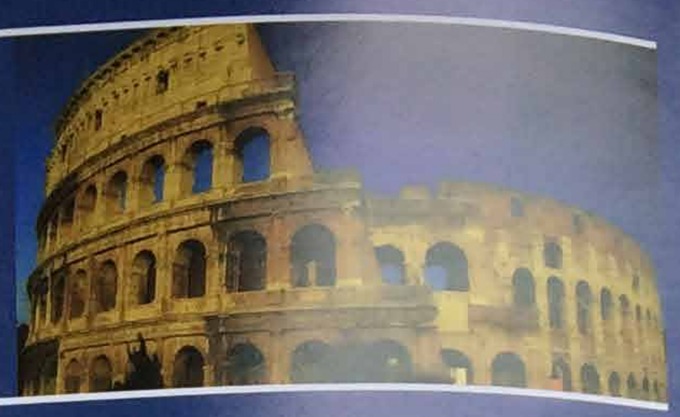
13th ESCRS Winter Meeting

Rome



Poster prize winners provide new insights into current controversies in cataract and refractive surgery

THE winners of the poster prizes at the 13th ESCRS Winter Meeting provided some surprising answers to controversial questions in cataract and refractive surgery.

Andreas F Borkenstein, US, received the prize in the cataract category for his presentation which asked the question "Do blue light-blocking IOLs protect the posterior segment of the eye from conditions such as age-related macular degeneration (ARMD) and nevi/uveal malignant melanomas?"

Using a tissue database of over 4,000 eyes acquired between 1981 and 1999 that had been implanted with conventional IOLs and referring to a meta-analysis of studies regarding uveal melanoma, Dr Borkenstein and his associates were able to demonstrate that the non-blue-blocking lenses entailed no additional risk of ARMD or uveal melanoma. Therefore, by extension, blue-blocking IOLs probably provide no protection against such conditions.

The prize in the corneal category went to Christina Peris-Martinez MD, Spain, whose poster investigated the corneal biomechanical properties in the osteogenesis imperfecta, a genetic condition which commonly results in a decreased production in the major fibrillar collagen type I.

Dr Peris-Martinez and her associates used the Ocular Response Analyser (ORA, Reichert) in nine patients with the condition and compared their findings with those obtained in a control group of patients. They determined that central corneal thickness and corneal hysteresis were diminished in patients with osteogenesis imperfecta. They postulated that the changes were due to specific alterations in the architecture of the collagen matrix in corneal stroma.

Andreas F Borkenstein (left picture) and George Kymionis MD (above) are presented with their awards by Dan Epstein

George Kymionis MD, Greece received the prize in the refractive category for his presentation "Laser in situ keratomileusis (LASIK) complications with the femtosecond laser".

His poster described the findings of a retrospective, noncomparative, interventional case series of 4772 eyes that had undergone femtosecond (IntraLase®) LASIK from September 2003 to June 2006. The study showed that there were direct or indirect complications due to femtosecond laser flap creation in 1.1 per cent of patients, although all eyes had a favourable final visual outcome.

The femtosecond laser flap-related complications included premature breakthrough of gas through the epithelium within the flap margin in eight eyes (0.17 per cent), gas bubbles in the anterior chamber that interfered with the laser pupil tracking/iris registration in another eight eyes (0.17 per cent), incomplete flaps due to suction loss in three eyes (0.06 per cent) and an irregular flap due to previous corneal scar in one eye (0.02 per cent).

Miniature glaucoma implant shows promise for combined glaucoma-cataract procedure

A MINIATURE glaucoma implant which is placed under a scleral flap may offer a safe and effective method for reducing intraocular pressure and anti-glaucoma medication in open-angle glaucoma eyes in combination with phacoemulsification and IOL implantation, according to a study presented at the 13th ESCRS Winter Meeting.

"This is a promising treatment. We did not observe any infection, corneal erosion or extrusion of the implant in our series of patients. The device successfully reduced postoperative IOP with less complications, although it is considerably more expensive than traditional methods," said Romeo Altafini MD, San Bassiano Hospital, Bassano del Grappa (VI).

Dr Altafini presented the results of a study evaluating the efficacy and safety of the Ex-Press miniature glaucoma implant (Optonol Ltd) in reducing intraocular pressure in patients undergoing combined cataract and glaucoma surgery.

The Ex-Press shunt is a 400µm wide by 3mm long, stainless steel device which is typically implanted under a scleral flap.

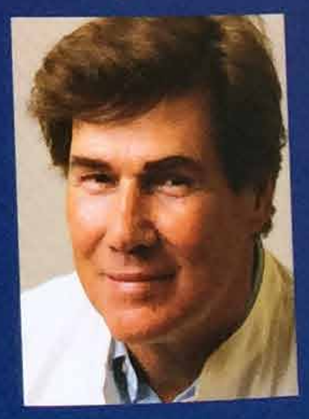
Dr Altafini's study included 20 eyes of 20 patients with open-angle glaucoma and cataract divided into two groups. Ten eyes (group one) underwent clear-cornea phacoemulsification with IOL implantation combined with Ex-Press (R-50) implantation under a scleral flap. The other 10 eyes (group two) were operated with combined trabeculectomy and cataract surgery.

Results showed that in group one the mean IOP decreased from 22.48 mmHg preoperatively to 10.8 mmHg at six months and 13.4 mmHg after the first postoperative year without medical treatment.

In group two, the IOP decreased from a mean of 21.80 mmHg preoperatively to 10.9 mmHg at six months and 13.2 mmHg after one year without medical treatment.

Complications included one incidence of athalamia in group one which resolved without surgical treatment. Investigators found no evidence of infection, corneal erosion or extrusion of the implant. There were no statistical differences between the results obtained with and without the implant under scleral flap regarding IOP or early complications, Dr Altafini concluded.

Rock 'n' roll phaco hits the right note



A MODIFIED and alternative phacoemulsification procedure dubbed 'rock 'n' roll phaco' by its creator offers surgeons a faster emulsification of the lens nucleus without compromising safety, according to a German study presented here.

Detlef Uthoff MD (pictured) told delegates attending the 13th ESCRS Winter Meeting in Rome that the rock 'n' roll technique is the culmination of over 30 years of experimenting with different approaches to phacoemulsification.

"This is my favourite technique for both mono and bimanual phacoemulsification. It is characterised by primarily fragmenting or sculpting the nucleus, which is then nudged 180 degrees and rotated along its sagittal axis with the help of the phacoemulsification tip. Later the nucleus is stabilised by a spatula and then emulsified from its posterior side. During emulsification the nucleus is held under the iris with the help of spatula," he said.

Dr Uthoff said that the technique, which demands a slightly longer learning curve to master than traditional methods, permits a faster and safer emulsification of the lens nucleus and can be used with all grades of cataract. He estimated that his modified technique reduces the ultrasound time by up to 30 per cent.