CHOROIDAL DETACHMENT
Even severe cases of complication can benefit from treatment
by Roibeard O’Eineachain in London

E ven in very severe cases of choroidal detachment, with or without retinal detachment, a surgical intervention can sometimes provide a useful restoration of vision, said Gisbert Richard MD at the EuroLam symposium of the 11th EURETINA Congress.

“Choroidal detachment and delayed suprachoroidal haemorrhage are rare complications after ocular surgery that may lead to severe visual deterioration or blindness. Surgical intervention is indicated in patients with high-grade and progradient choroidal detachment,” said Dr Richard, University Medical Center Hamburg-Eppendorf, Hamburg, Germany.

He noted that choroidal detachment is a detachment of the uvea from the sclera and usually there is a sudden effusion of serous humour but no blood into the suprachoroidal space. Suprachoroidal haemorrhage, on the other hand, is an accumulation of sanguineous fluid into suprachoroidal space. Both complications originate from the same pathophysiological process, Dr Richard said.

“We know from animal experiments that stretching the choroid may lead to serous effusion into the suprachoroidal space and to traction on the vessels, especially at the base of the ciliary body and then to a massive effusion of blood from ciliary vessels,” he noted.

Glaucoma surgery carries the highest risk for the complication, particularly when Molteno filtration devices are used. The rate of choroidal detachment can reach six per cent, or when the patient is aphakic and the rate can be as high as 10 per cent. Around 10 per cent of patients with choroidal detachment will also have retinal detachments. In aphakic patients, vitreous prolapse into anterior chamber and kissing chorioids are fairly common.

The systemic risk factors for the choroidal detachment include advanced age, arterial hypertension and diabetes. The ocular risk factors are aphakia, pseudophakia after glaucoma operations, and retrobulbar block anaesthesia. Prophylaxis includes strict control of arterial hypertension and the intraocular pressure, using such means as hyperosmotic drugs and prolonged oculopression, with the aim of keeping blood pressure and intracocular pressure as close to normal throughout any ocular surgery. In addition, special care should be taken with anterior segment surgery in myopic, hyperopic or aphakic patients.

Dr Richard noted that choroidal detachment can sometimes be delayed for several days postoperatively. A patient’s presenting symptoms in such cases include a sudden loss of vision accompanied by pain and occasionally also vomiting and nausea. Examination will typically reveal a flattening of the anterior chamber.

Surgeons are often too quick to declare some of the more complicated cases as hopeless, Dr Richard said. He said that in his own series of 16 eyes of 16 patients with choroidal detachments, 10 of whom also had retinal detachments, simple draining and/or vitreoretinal surgery resulted in complete re-attachment of the choroid and retina in 15 patients and re-attachment of the macula attached in 15 patients at three months’ follow-up.

The study involved nine men and seven women with an average age of 71 years. They had undergone an average of 1.9 eye operations before their choroidal detachments occurred. In addition, six had small retinal detachments and four had bullous retinal detachments.

He noted that five patients were myopic, four were hyperopic and 10 were pseudophakic or aphakic. Their intraocular pressures covered a broad range, eight had pressures of 8.0 mmHg or below, six had pressures ranging from 11.0 mmHg to 22.0 mmHg, and two had pressures above 22.0 mmHg. The patients underwent a total of 10 drainage procedures, two of which were re-operations, and nine vitreoretinal procedures, one of which was a re-operation.

Dr Richard and his associates performed the drainage procedures seven to 10 days after the choroidal detachments occurred. It involved setting up an infusion in the anterior chamber to deepen it and raise the intraocular pressure, puncturing the choroidal detachment at its highest point, around 2.5mm from the limbus, and then using gentle irrigation allowing the yellow liquid to flow out of the suprachoroidal space, he said.

A vitreoretinal approach is the best option in eyes with concomitant retinal detachment, vitreous haemorrhage or dislocated lens in choroidal detachment, Dr Richard said.

“Although the pars plana approach is difficult, it has several advantages. First, it enables the anatomic reconstruction of the intraocular structures affected. It also allows the removal of pathologic vitreous components and haemorrhages and vitreous tractions,” he added.

Dr Richard described a complex case involving a choroidal detachment patient who also had a cataract requiring extraction. Following the cataract procedure and drainage of the suprachoroidal space, he removed all the vitreous and performed a retinotomy which also cut into the choroid. He then performed a silicone oil infusion and after the slow re-attachment of the retina and the choroid he carried out a laser treatment.

He noted that in his series of patients there was residual choroidal detachment in nine patients who underwent drainage procedures and in four who underwent a vitreoretinal procedure. He said that small peripheral choroidal detachments usually regress within a few days after surgery but require strict control because of the risk of retinal complications. He added that an almost complete reattachment of the retina usually occurs intraoperatively.

“Reconstruction of the choroidal and retinal anatomy usually results in rapid and lasting functional improvement,” Dr Richard concluded.