Macular translocation gets faster, safer

Daithi O hAnluain in London

MACULAR translocation is a maturing surgical technique for treatment of macular disease, but the complications are still a concern, according to presenters at the Moorfields Bicentenary Scientific Meeting.

Cynthia Toth MD, associate professor of ophthalmology at Duke University Medical Centre, presented the two-year results of her four-year prospective study of macular translocation outcomes.

The study recruited 64 neovascular AMD patients with 20/60 vision or worse and with vision loss (>20/500) in the fellow eye, usually disciform. The mean age was 76 years. Follow-up examinations occurred at six, 12, 24, 36, 48 months. Outcome measures included acuity, reading speed, quality of life, fluorescein angiogram and OCT. Follow-up included 61 (95%) patients at one year, and 57 (90%) at year two.

Dr Toth reported that median distance acuity went from 20/125 preoperatively to 20/80. Median reading speed increased by 25 words per minute. At one year follow-up, 51% of patients were seeing 20/80 or better, while 54% were seeing 20/80 or better at two years.

Of patients starting out 20/80 or better, 75% were 20/80 or better at one year and 61% continued at that level at two years. Among those starting out at 20/100-20/1000, 46% were 20/80 or better at one year, and 48% at two years.

Complications common

Complications were common. These included CME, the biggest complication with 25 cases (41%), epiretinal membrane 14 (23%), and recurrent choroidal neovascular membrane 13 (21%). Progressive retinal pigment epithelium atrophy occurred in seven patients (11%), and retinal detachment with PVR in five. Residual tilt, a major concern with this procedure, occurred in 14 patients (22%).

Dr Toth noted that CME was common in early surgeries. Epiretinal membrane was also very common due to a posterior retinotomy site perfusion. Retinal detachments also dropped dramatically from 40% in early surgeries to consistently under 10% once post-op positioning began. She added that surgical techniques must be refined to lower the incidence of residual tilt.

Noting that macular translocation studies around the world demonstrate results ranging from no change to 1.5 lines of vision gained, Dr Toth compared macular translocation to other AMD treatments, though with several caveats. She said macular translocation series were small, prospective or retrospective, not randomised and generally involved larger lesions.

With those caveats, she said macular translocation could restore lost visual acuity or at least stabilise vision unlike other treatments such as photodynamic therapy or pegaptanib sodium (Macugen®, Eyetech).

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"If one looks at macular translocation outcomes, we can improve vision in patients or stabilise it, in contrast to telling the patient 'you will have a progressive decrease in vision,'" she said.

Macular translocation does have its critics, however.

"It doesn't deal with the underlying pathology I think it's quite limited and I don't think it has a long-term future in its current form. It takes a long time, you have to do squint surgery, you'd really only do it on the second eye and it's not for everybody," said Paul Rosen FRCS FRCOphth, Oxford Eye Hospital, and president of the UKISCRS.

However, others like Lyndon da Cruz at Moorfields, point out that macular translocation may be the best option currently available for advanced cases of AMD.

"Macular translocation is special in that it can take someone who has lost their vision quite dramatically and restore it, if it is applied early enough. If everyone was coming in earlier we'd treat the mild and specific cases with the simpler and less invasive techniques such as PDT or Macugen, but with the very serious cases, where there's no other option, we'd apply macular translocation. What's great is that we have another option."

New vision restoring techniques on the horizon

Dr Da Cruz and others are developing another technique, RPE-choroidal transplantation.

"There are two ways you can deal with the problem where the disease is under the retina. One way is to lift the retina and move it to healthy tissue, the other way is to reach under the retina, take out all the blood vessels and diseased tissue, and transplant RPE sheets under the retina. We move the sub retinal material rather than the retina," explained Dr da Cruz.

The technique is less complicated and invasive than macular translocation, and it does not require supplementary surgery to accommodate for tilt.

It can be performed through a 0.3 mm incision. So far Dr da Cruz has performed 11 cases which have demonstrated the feasibility and reproducibility of the technique. A prospective trial is planned for the near future.

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