Compared phaco/viscocanalostomy surgery enhances outcomes

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in Heidelberg.

COMBINING phacoemulsification cataract surgery and viscocanalostomy produces significant additional IOP-lowering effects, a new study concludes.

In a study involving 201 eyes of 173 patients, German investigators performed combined viscocanalostomy/phaco surgery, with 138 eyes undergoing isolated viscocanalostomy and the other 63 eyes having the combined surgery. Eighty-five per cent of the patients who underwent viscocanalostomy surgery combined with phacoemulsification achieved intraocular pressure (IOP) reductions of at least 20 per cent, with IOP levels remaining consistently below 22 mmHg.

The total average drop in IOP was from 27 mmHg to 16.6 mmHg, in the study group as a whole. The isolated viscocanalostomy patients saw IOP reductions from 29 mmHg to 17.2 mmHg. The combination surgery eyes which had an average initial pressure of 25 mmHg, dropped to 15.4 mmHg, postoperatively.

‘We have very positive outcomes in combining these two surgeries, that resulted in 3 mmHg lower IOP than with viscocanalostomy alone, and no increased complication rate,’ said Manfred Tetz MD at the 22nd Congress of the German-speaking Society for Intraocular Lens Implantation, Interventional, and Refractive Surgery (DGII).

The average patient age was 67 years. The follow up time ranged from one to 42 months. Phaco was performed through a separate incision at a different location (usually temporal), and the glaucoma operation was performed at around the 12 o’clock location.

Dr Tetz noted that while most of the patients were on glaucoma drugs preoperatively, with 61 per cent requiring between two and three different medications, 63 per cent needed none after surgery.

In the overall group he noted a steep drop in IOP to around 17 mmHg. This occurred within one to two months after surgery and lasting 36 months. The group that underwent combination surgery sustained its 2-3 mmHg advantage in IOP over 36 months (p<0.001).

Most patients showed success immediately after the operation. The success of the surgery was defined as IOP consistently below 22 mmHg and a reduction in IOP of at least 20 per cent. More than 85 per cent of eyes after viscocanalostomy were controlled with no more than two medications, meeting the definition for success.

The technique had a low complication rate and required little postoperative care, he added.

The risk of failure doubles in patients who have had previous laser trabeculoplasty, the rate of success being 73 per cent lower (p=0.003). The revision rate increases from 15 per cent to 25 per cent in patients with previous laser trabeculoplasty (p=0.004), Dr Tetz observed.

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He said that experience with viscocanalostomy can positively influence surgical results. Furthermore, he noted that the success rate of canaloplasty is even higher than with viscocanalostomy, with more effective IOP reduction into the ‘lower teens’, and a lower complication rate.

The major difference between viscocanalostomy and canaloplasty is that the canaloplasty allows for a full circumferential opening of the canal, not just a section of it. It uses viscoelastic and a micro-cannula to forcibly open the entire canal of Schlemm and thereby reduce IOP, without the creation of a fistula or the need of a bleb, he explained.

The European branch of the Canaloplasty Multicentre study, which was carried out in various centres in Europe and South Africa, included 131 patients. Patients underwent canaloplasty, alone and in combination with phaco.

The patients had open-angle glaucoma with IOPs above 21 mmHg. The study excluded patients with previous angle surgery or more than two trabecuoplasties.

Baseline IOP was 23.7 mmHg and was reduced to 15.5 mmHg at three months, to 15.1 mmHg at six months, and to 14.9 mmHg at 12 months after surgery. The overall pressure was reduced by 37 per cent.

In patients with combined surgery, the overall pressure reduction was 45 per cent, with the average baseline IOP of 24.7 mmHg dropping to 13.5 mmHg by 12 months. Of the 131 patients participating at different European centres, 40 were treated by Dr Tetz in Berlin. The average age was 68 years.

He performed combination canaloplasty/phaco on 23 of these and checked them at one, three, six, 12 and 18 months. The final pressure was 13.7 mmHg and represented a decrease in pressure by 40 per cent. Compared to the results of the previous viscocanalostomy study in which IOP dropped to 16.6 mmHg, these results were superior, he noted.

‘Glaucoma surgeons at the DGII Congress asked Dr Tetz and glaucoma specialist Robert C. Stegmann MD whether earlier operations made more sense rather than sticking to lengthy drug treatments to reduce IOP, in terms of further improving outcomes.

‘People tend to undervalue the relentless progressive malignant nature of this disease. If left uncontrolled it will blind you in the long term. As far as I am concerned, I would go for surgery immediately. We had the same argument 35 years ago. For some reason there is a huge opposition to doing the obvious,’ said Prof Stegmann.

Clive Peckar MD concurred, ‘I suspect that we are going to be operating earlier. The problem is that it is very difficult to prove surgery will be effective and there is so much cynicism out there against this. So I think we have to do what we are doing now and that is prove that this surgery is safe, prove it has virtually no complications, and report that we are all starting to operate earlier and earlier,’ he said.

Dr Tetz noted that since beginning these surgeries, and mastering these techniques, he can sleep almost as well as after cataract surgery. Furthermore, while patients were once stationary for days and the treatment period was lengthy, ophthalmologists now dealt with no complications and a surgery that worked.

Dr Tetz maintained that changes are already under way. Surgeons have tried a simpler cut through the sclera to gain easier access to the canal, he said. He noted, however, that it was one thing to do a quick, easy, and simple procedure and another to do a consistent job with precision and safety.

Dr Peckar observed that when phacoemulsification was first performed 40 years ago, it was a four-hour surgery with an hour of phaco time. Based on that, no one would ever want to do phaco, but now it is a quick and simple, commonplace procedure.

‘We have to stick with this one, even if it is complicated and takes time. The procedure will evolve,’ he said.

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