

# Performance of phakic IOLs reviewed at two-year follow-up

**Dermot McGrath  
in Rome**

PHAKIC IOLs will command an ever-growing share of the refractive surgery market in the future, but surgeons must not lose sight of their primary responsibility to ensure the safety and efficacy of these implants in healthy eyes, according to Scipione Rossi MD.

Dr Rossi was speaking during a special symposium on phakic IOLs held during the 9th Winter Refractive Surgery Meeting. His own presentation was focused on a two-year follow-up of seven different models of phakic IOL that had been implanted during a live surgery session at the ESCRS meeting in Rome in 2003.

Dr Rossi noted that the study had been designed as much as possible to ensure a fair and objective comparison between the postoperative outcomes of the different lenses. All IOLs were implanted by experienced surgeons and patient selection criteria were closely matched for each IOL type.

“This allows us to perform something close to a ‘pure’ evaluation of the actual IOL. We

can examine not only the respective UCVA, BCVA, endothelial cell counts and so forth, but also factors such as lens positioning and complications without worrying unduly about the influence of the actual surgery itself,” said Dr Rossi.

## Seven lenses for seven patients

In 2003, five female and two male patients were implanted with one of seven different phakic IOLs: an anterior chamber angle-fixed lens such as ICARE, GBR/Vivarte or Phakic 6, an anterior chamber iris-fixed lens such as Verisyse/Artisan or Artiflex, or a posterior chamber IOL such as the ICL or the PRL.

Reviewing the two-year follow-up results of each IOL, Dr Rossi commented that overall the results had been very good in terms of safety, efficacy and stability.

The Artiflex IOL, implanted by Camille Budo MD, recorded the best refractive outcome of all the IOLs, although the GBR/Vivarte, the PRL, and the Phakic 6 also performed to an extremely high standard, remarked Dr Rossi.

In terms of complications, Dr Rossi said that there were two cases of pupil ovalisation in patients implanted with the Vivarte and the Phakic 6 lenses.

“It is interesting to note that this problem occurred with two lenses which are angle-fixed, but in these patients the issue is not very serious because their BCVA and overall refractive outcomes were very good,” he said.

More seriously, Dr Rossi noted two cases of lens opacities associated with the ICL and the ICARE implants. He said that careful examination of the video of the surgery involving the ICL implantation led him to conclude that it was the lens itself and not the surgery that was responsible for the cataract formation. In the case of the ICARE, however, he said that it was possible that the surgical procedure itself could have played a role in the formation of the cataract.

## Demand for phakic IOLs likely to grow

Dr Rossi said that phakic IOLs would continue to command an increasing share of the refractive market in the future.

“The anatomy of the eye, corneal thickness, pupil size and so forth, imposes limits on the amounts of refractive correction that can be obtained by reshaping the cornea. For these patients, phakic IOLs are perhaps the only alternative. And the population eligible for these procedures is growing as both surgeons and patients become more aware of the benefits offered by such procedures.”

Dr Rossi reflected that IOLs have been implanted in Europe for over 15 years now.

“The initial results were not promising although thankfully improvement in surgical techniques and devices have reduced complications. We now have a lot of studies showing a significant percentage of patients achieving uncorrected vision of 20/40 or better with phakic IOLs.”

Over the past decade, an estimated 150,000 refractive IOLs have been implanted in Europe, said Dr Rossi, a figure that is projected to increase significantly in the near future.

“In 2003 alone, there were an estimated 32,000 phakic IOLs implanted in Europe and the

projection for 2008 is around 100,000 per year,” he said.

Dr Rossi noted that American surgeons were watching developments in Europe very closely.

“First of all they are very interested in the results we are achieving with phakic IOLs and they are also keen to pick up some tricks and tips for implanting these IOLs themselves as the refractive market there expands beyond laser only treatments,” he said.

European surgeons thus have a major opportunity and responsibility to develop the full potential of the phakic IOL market, said Dr Rossi. Better materials allied to better surgery would help improve results, raise standards and instill confidence in the procedure, he suggested.

“We have not yet attained the highest standards but we’re getting closer. So let’s be confident in opting for refractive IOLs when the anatomical characteristics of the eye impose this procedure,” he said.

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