Lucio Buratto MD, Milan, Italy delivered this year’s Binkhorst Medal lecture which described the Evolution of Phakic IOLS and asked if they are the future of refractive surgery. His presentation covered the history of Phakic IOLS, providing a review of the different types of lenses that have become available over the years together with a glimpse at those just now appearing on the horizon.

The demand for phakic IOLS has risen in response to the realisation that eyes with higher refractive errors are beyond the scope of laser surgery, Dr Buratto noted. Complications like ectasia, diffuse lamellar keratitis and corneal haze have also driven the search for alternative approaches to refractive surgery. Meanwhile, recent years have seen the rapid evolution of both anterior and posterior phakic IOLS.

“Phakic IOLS offer many advantages over laser refractive surgery. They permit a good quality of vision without altering the curvature and the anatomy of the cornea on the centre. They provide predictable, precise and stable refractive results. Moreover they can be implanted without expensive instruments like lasers and aberrometers with a technique similar to cataract surgery,” he said.

Dr Buratto described the close ties between the history of phakic IOLS and that of IOLS in general. He noted that when Harold Ridley implanted the first IOL in a cataract patient he also introduced a whole new concept in visual correction, namely lenses that are worn inside the eye. While the lens Dr Ridley used was designed for the correction of aphakia, the potential of the IOL for the correction of ametropia was readily apparent, he said.

Dr Buratto reviewed the refractive results obtained with the most widely used phakic IOLS. He also explained the different surgical techniques employed in the implantation of each lens type.

“The implantation of a phakic IOL is a refractive operation. The patient expects a refractive result and an operation that lacks intra- and postoperative complications,” he noted.

Dr Buratto also described the principal causes of complications and suggested ways to avoid them. He explained how improvements in lens design and surgical technique have made such complications less frequent and how new diagnostic technologies are providing surgeons with a much clearer idea of their patient’s intraocular anatomy, both pre- and postoperatively.

Perhaps most important of all was Dr Buratto’s emphasis on the need for good patient selection when considering candidates for phakic IOLS. While current lenses and surgical techniques are safer than those of former times there nonetheless remain a large number of patients for whom the implants remain unsuitable.

“Don’t implant if you don’t have the right case. Don’t make the same mistake that has been made with laser correction.”