Myopic patients requesting RLE should be fully informed of retinal detachment risks

Sean Henahan in Singapore

MYOPIC eyes do run an increased risk of rhegmatogenous retinal detachment following refractive lens exchange (RLE) compared to hyperopic eyes, a new review of the literature confirms. Therefore informed consent becomes especially important in that patient population, according to Emanuel Rosen MD, FRCSE, Manchester, UK.

“This topic is particularly pertinent because RLE as a refractive procedure is overwhelmingly successful. It is a life-changing procedure as well as a vision-changing procedure for our patients. However, both surgeons and patients must be aware of the risks. It is up to us to understand it and explain it to the patient, and let the patient make the final decision,” Dr Rosen told a session of the 21st Congress of the Asia-Pacific Academy of Ophthalmology.

Although RLE has become a popular procedure worldwide, studies regarding retinal detachment risk are relatively rare. Dr Rosen evaluated all studies conducted on the subject over the past 12 years. He looked at studies that included cataract surgery as well as those limited to RLE. While the studies showed wide variations, several risk factors emerge.

“Some of the risks apply to any eye surgery. This is a bilateral procedure that is done simultaneously in some centres including our own. We’re dealing with large eyes and increasing the space within the eye by removing the natural lens. There is a distinction in my view between lens exchange in myopia and lens exchange in hyperopia, because of the size of the eye and the risk of retinal detachment, which is virtually nonexistent in hyperopic eyes,” he noted.

First of all, the rate of retinal detachment in the general population without surgery appears to be 0.0118% or 12 eyes per 100,000 according to a recent epidemiological study by PJ Polkinghorne MD of the University of Auckland. That study showed that even in a general population about one per cent retinal detachment per year.

Several studies indicate that cataract or RLE surgery considerably increases the risk of retinal detachment in myopes. A study of 1800 phacoemulsification/ cataract extraction procedures showed a rate of 1.17% over a 10-year follow-up period, 0.117 per annum. Patients under the age of 50 had a cumulative rate of more than five per cent per annum. The rate was much lower among those over 70 years of age. The median interval from phaco to retinal detachment was 3.25 years. Complicated surgery increased the risk. However, YAG laser capsulotomy did not appear to increase the risk.

Additional risk factors identified

A study published this year in Ophthalmology by Stephen Tufts MD of Moorfields Eye Hospital looked at the risk for retinal detachment after cataract surgery. That study indicated that the risk for retinal detachment increases by a factor of 20 when a posterior capsule tear occurs. Zonular dehiscence, retinal detachment in the fellow eye, longer axial length and lattice degeneration also increased the risk. In that study 25% of retinal detachments occurred within three months of surgery. 50% population. We suggest choosing a large optic, which will facilitate retinal management in those patients. A large capsulorhexis and an intact posterior capsule are also of course very desirable. Postoperative peripheral retinal scrutiny over a significant period is well worthwhile. I believe that the benefits are worth the risk in most myopic patients, because this is a life-changing experience,” Dr Rosen said.

Nonetheless, these studies emphasise that the surgeon must be very careful when performing refractive lens exchange in myopic eyes. It is a very good choice for hyperopic eyes where risk is very low. It is essential to take the time to educate the myopic patient concerning RLE because of increased risk.

“The topic is particularly pertinent because RLE as a refractive procedure is overwhelmingly successful. It is a life-changing procedure as well as a vision-changing procedure for our patients,” Dr Rosen said.

“We know there are lifelong risks of retinal detachment in myopes. Refractive lens exchange increases the risk more than cataract extraction because of the youth of that population.”

“We know there are lifelong risks of retinal detachment in myopes. Refractive lens exchange increases the risk more than cataract extraction because of the youth of that population.”

Dr Rosen considered 21 published studies, noting that numerous variables including age range, axial length, follow-up and patient selection make any analysis difficult. Those studies showed a cumulative rate of retinal detachment in operated eyes ranging from 0% to 8.1%. Phacoemulsification itself increases the risk tenfold. The larger, longer, studies seem to agree on a rate of 0.3%.

Dr Rosen told a session of the 21st Congress of the Asia-Pacific Academy of Ophthalmology.

Nonetheless, these studies emphasise that the surgeon must be very careful when performing refractive lens exchange in myopic eyes. It is a very good choice for hyperopic eyes where risk is very low. It is essential to take the time to educate the myopic patient concerning RLE because of increased risk.

“The topic is particularly pertinent because RLE as a refractive procedure is overwhelmingly successful. It is a life-changing procedure as well as a vision-changing procedure for our patients,” Dr Rosen said.

“We know there are lifelong risks of retinal detachment in myopes. Refractive lens exchange increases the risk more than cataract extraction because of the youth of that population.”

Dr Rosen considered 21 published studies, noting that numerous variables including age range, axial length, follow-up and patient selection make any analysis difficult. Those studies showed a cumulative rate of retinal detachment in operated eyes ranging from 0% to 8.1%. Phacoemulsification itself increases the risk tenfold. The larger, longer, studies seem to agree on a rate of 0.3%.