

SMILE complications

Major review shows safety and consistency of SMILE procedures.

Roibeard Ó hÉineacháin reports

A review of more than 2,000 patients who underwent small-incision lenticule extraction (SMILE*, CZM) over the past seven years indicates that the procedure only rarely has intraoperative complications, reports Detlev R.H. Breyer MD, Düsseldorf, Germany.

"We are still smiling and moved completely from LASIK to SMILE, whenever possible" Dr Breyer told the 24th ESCRS Winter Meeting in Marrakech, Morocco. "No flap complications, no dry eyes."

Dr Breyer and his optometrists analysed videos from 2,165 consecutive eyes undergoing SMILE procedures performed at the Breyer-Kaymak-Klabe Eye Surgery & Premium Eyes in Düsseldorf, Germany.

He noted that the SMILE procedure was completed in 2,143 eyes (98.98%) and aborted in 22 eyes. No patient lost more than one line of best-corrected visual acuity. Suction loss occurred in 15 eyes (1.25%), among which the procedure was completed in five eyes, but was aborted in 10 eyes. Among those 10 eyes, two underwent implantation of an implantable collamer lens (ICL) and three resumed wearing spectacles or contact lenses.

"The good thing is that the patient's vision will not be harmed by the procedure when it cannot be completed due to suction loss. The time of potential flap complications is gone." Dr Breyer tells his patients in the informed consent to reduce fear and make them feel safe and well kept.

One patient developed late keratectasia. The patient had forme fruste keratoconus preoperatively and was informed of the risk of the complication. The keratectasia began at six months but was successfully treated with accelerated protocol iontophoresis corneal cross-linking (CXL) and at five years the cornea remains stable and best-corrected visual acuity is 0.5 whereas BCDVA before surgery was 0.4.

There were also three eyes in which the lenticule could not be removed, among which one eye underwent transepithelial PRK and two underwent ICL implantation.

Meanwhile, only eight eyes required refractive retreatments, including PRK in seven eyes and ICL implantation in one eye, Dr Breyer said. He noted that the retreatment rate was fairly low, considering that the interrupted series of patients started with their first patient at the Düsseldorf Centre at PremiumEyes, at a

time when only around 10 centres around the world were performing the procedure.

He explained that over the years, surgeons have learned techniques for dealing with the complications that may occur. For example, in cases where there is incomplete dehiscence of the lenticule, it can often be removed with relative ease using a rhexis forceps, a technique Sri Ganesh from Bangalore introduced. He added that black spots have become less common as experience with the procedure and knowledge of appropriate energy settings has increased.

"There was definitely a learning curve. SMILE is not LASIK, it is not an excimer laser procedure. SMILE is more corneal surgery than laser surgery," he stressed.



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