When I examined Mr W at the slit lamp, the lens implant was only partially visible – dehiscence of the zonular fibres meant that the implant was no longer suspended in its intended position, i.e. centred behind the pupil – the lens was, literally, hanging by a thread. Without the lens focusing images on the retina, Mr W’s vision was poor – he was only able to count fingers, and was unable to read any of the letters on the Snellen chart. To make things worse, vitreous gel had prolapsed through the pupil into the anterior chamber, and was causing persistent inflammation and elevation of the intraocular pressure...

Zonular dehiscence can occur for a variety of reasons, ranging from iatrogenic (congenital ectopia lentis) to secondary acquired, such as pseudoexfoliation syndrome and Marfan’s syndrome, among others. Trauma and surgical complications from cataract surgery are other common contributing factors.

A subluxed or dislocated lens or lens implant can lead to a myriad of ocular complications. Aside from those experienced by Mr W, corneal decompensation and retinal detachments have been described, and symptoms may range from glare and diplopia, through eye redness and pain, to permanent and irreversible visual impairment / blindness.

Management of a subluxed lens has traditionally involved surgical removal of the vitreous gel (vitreectomy), followed by removal of the artificial lens. This would then be replaced by an anterior chamber intraocular lens (ACLIL) implant that is supported by the iris, as there is no longer any other support structure within the eye with which to hold a lens in position. While this is a quick and technically less-challenging procedure, ACLIL implants are associated with other yet complications, which make them unsuitable for some patients. It also necessitates creating a large (17mm) incision in order to get the ACLIL into the eye.

Other options include suturing either the original lens or a new implant to the scleral wall (scleral fixation) or to the iris (iris fixation). These, too, are potentially fraught with challenges. Suture fixation is fiddly and technically more difficult; while suture failure or cheese-wiring of the suture through ocular tissues inevitably mean that the lens would become dislodged again in 5-10 years.

More recently, an elegant technique using intraocular fixation has been described by Hungarian Ophthalmologist Dr Gabor Scharioth, which neatly avoids many of the problems mentioned above. Sutures are not required to secure the lens, and therefore there is no risk of subsequent suture failure. The intraocular tunnels support the haptics (arms) of the intraocular lens in the requisite position, and allows for excellent centration of the lens behind the pupil. This is of critical importance, as lens performance deteriorates dramatically if not positioned correctly, resulting in poor vision.

Mr W’s multifocal intraocular lenses presented an additional challenge. Generally, patients prefer to have the lenses of similar, or better yet, identical, design in both eyes. This generates similar images in both eyes, and hence less confusion and easier adaptation to the lenses. Besides, multifocal lenses are expensive, and having paid for the lens once, it seemed a shame to deprive Mr W of continued use of the premium lens by exchanging it for a monofocal one. That meant having to rescue and re-use the subluxed lens by securing it in place using the Scharioth technique. Thankfully, his surgery proceeded uneventfully and he made a quick recovery. By the end of the first week, his vision had recovered to 6/9, and at one month, that had improved further to 6/7.5, with near acuity of N5 – close to perfect vision for distance, and perfect vision for near.

A satisfactory outcome even in less complicated circumstances, but more so if you consider the fact that his vision had been hanging by a thread...