

Anterior Iris Claw Lens

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The iris claw lens was first used in a phakic eye as an occlude in a case of intractable diplopia by Jan G.F. Worst of Holland in 1978. Fechner and Worst used it as a phakic lens for myopia in 1987 and Daljit Singh (MD) used it to treat hyperopia the following year. Today, a phakic iris claw lens (Artisan, Ophtec USA, Boca Raton, Fla., USA) is considered safe and effective for refractive surgery.

This lens was introduced in 1979 in India by Daljit Singh for aphakia. Since then we have done over 150,000 iris claw lens implantations. It is a far better lens than a sulcus fixated posterior chamber lens or the wide variety of angle supported lenses, in terms of centration, tolerance, and the versatility of application. Even today it remains unmatched in versatility. However, an in-the-bag posterior chamber lens is clearly a better option, wherever possible.

The application of the iris claw lens in diverse situations remains unmatched. From the very beginning, iris claw lenses were used in aphakic eyes with no posterior capsular support.

All that is needed is the availability of iris on two sides of the pupil. There is no danger of angle-related problems (the bane of angle-supported lenses) as the lens haptics do not reach the angle. There is no risk of decentration and pupil capture (the bane of sulcus-fixated posterior chamber lenses) because of the unique lens design.

We started lens implantation in pediatric cases in 1980, starting with trauma cases and secondary implants. Soon after, we used the lens for congenital cataract and Marfan's syndrome cases. An iris claw lens can be implanted in cases of microcorneas (the lens size can be reduced to

4.0 mm, the optic being 2.0 mm in diameter) or any size of megalocornea. In the latter case, what the aphakic eye needs is the optic on the pupil and the small haptics of iris claw lenses. All the good comes from the optic and all the problems arise from the haptics. Posterior chamber or angle-supported lenses have not been able to meet the challenge of megalocornea. Scleral fixation of posterior chamber lenses is traumatic and is not the ideal solution. All cases of complicated pseudophakias with or without endothelial decompensation can get a lens exchange with an iris claw lens. After the removal of the offending lens and inserting an iris claw, many eyes tend to cool down. In case an eye needs a DSEK, iris claw lenses hold good as far as injecting air into the anterior chamber for tamponade is concerned. Retention of the air bubble in the anterior chamber with the iris claw lens in place bails you out of many difficult situations during DSEK.

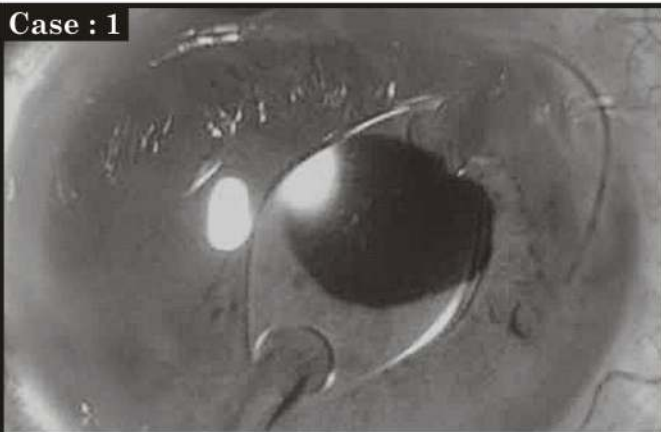
One of the biggest achievements of the iris claw lens has been its use in cases of central corneal opacities where it can be used eccentrically to restore useful vision, thereby avoiding keratoplasty, a choice not available with any other lens design.

Vitreoretinal surgery is not interfered with by the presence of an iris claw lens. The iris claw lens is becoming familiar to cornea surgeons as an important optical tool, when a lens has to be implanted in a wide variety of difficult situations. The long time prejudice against iris claw lenses is wearing off.

The iris claw lens has become an integral part of the ophthalmic armamentarium and as yet there is nothing that can replace its functions in the same atraumatic way that it does.

CASE PHOTOS

Case : 1



Patient with angle supported IOL and endothelial decompensation came for penetrating keratoplasty-only his IOL was exchange with anterior iris claw lens. The cornea is stable for the last 6 years

Case : 2



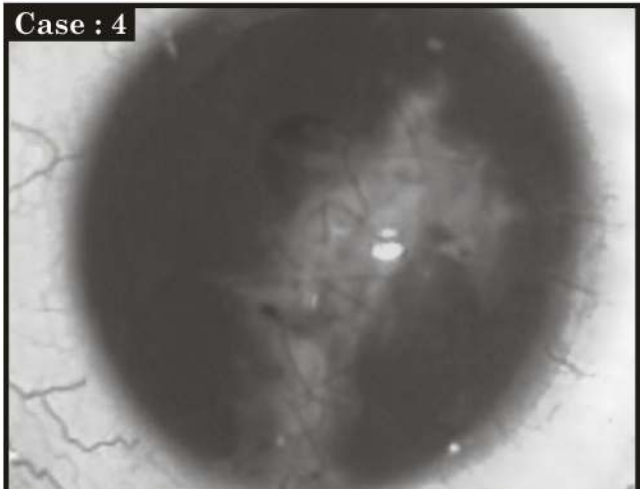
Iris claw lens in a patient of traumatic cataract

Case : 3



Very small lens in a small eye operated for cataract

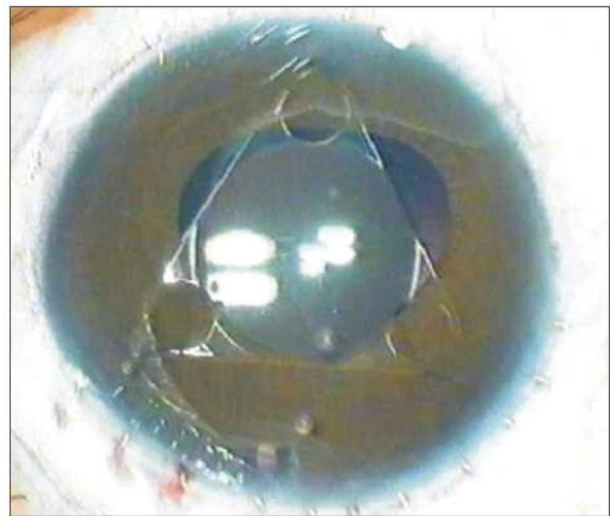
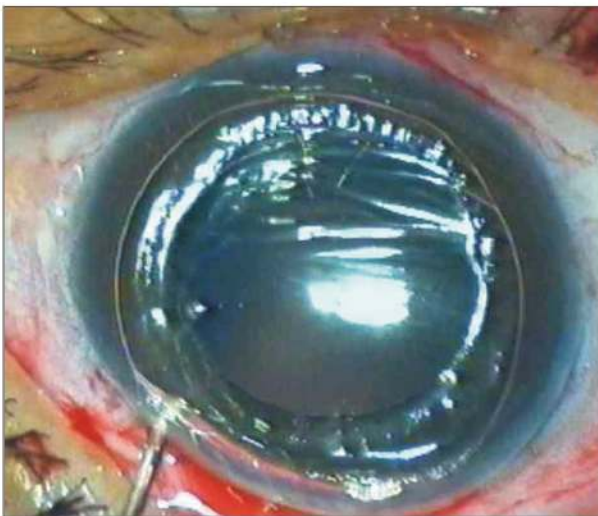
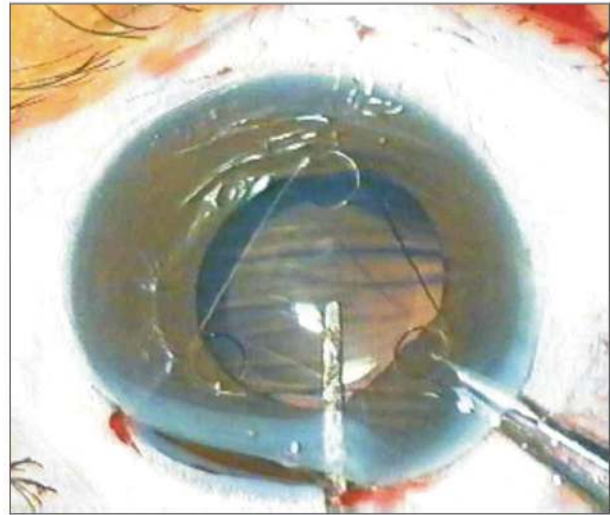
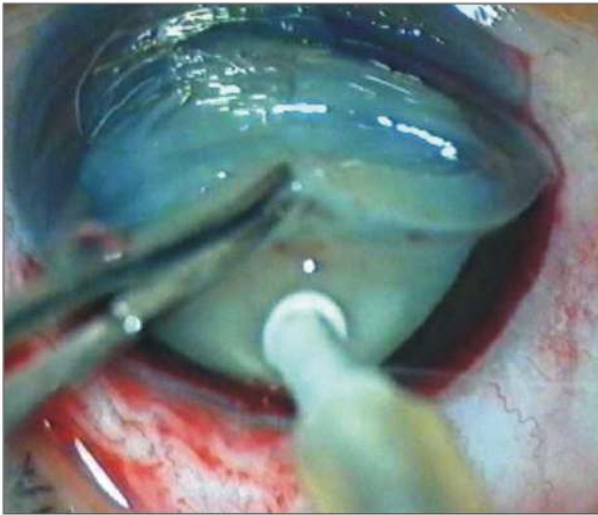
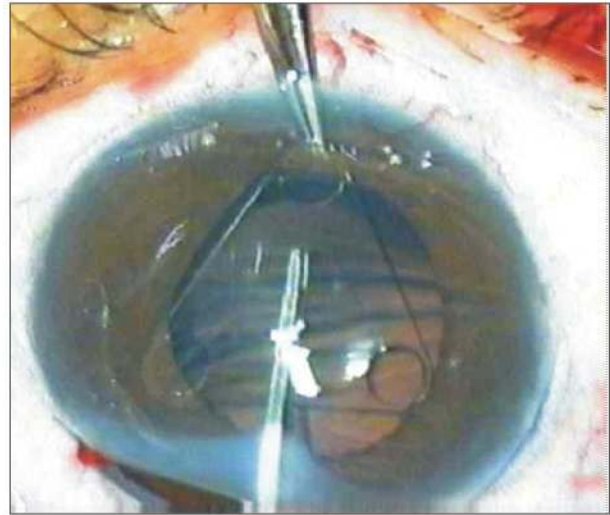
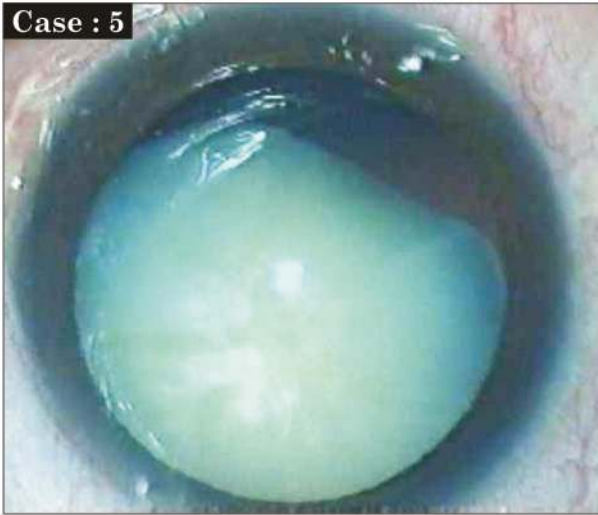
Case : 4



A case of corneal tear in a child of 2 years which was repaired elsewhere. We should make use of what ever clear cornea is left and implant the IOL accordingly. Anterior segment reconstruction is very important and this is a very useful pair of scissors i have used.

CASE PHOTOS

Case : 5

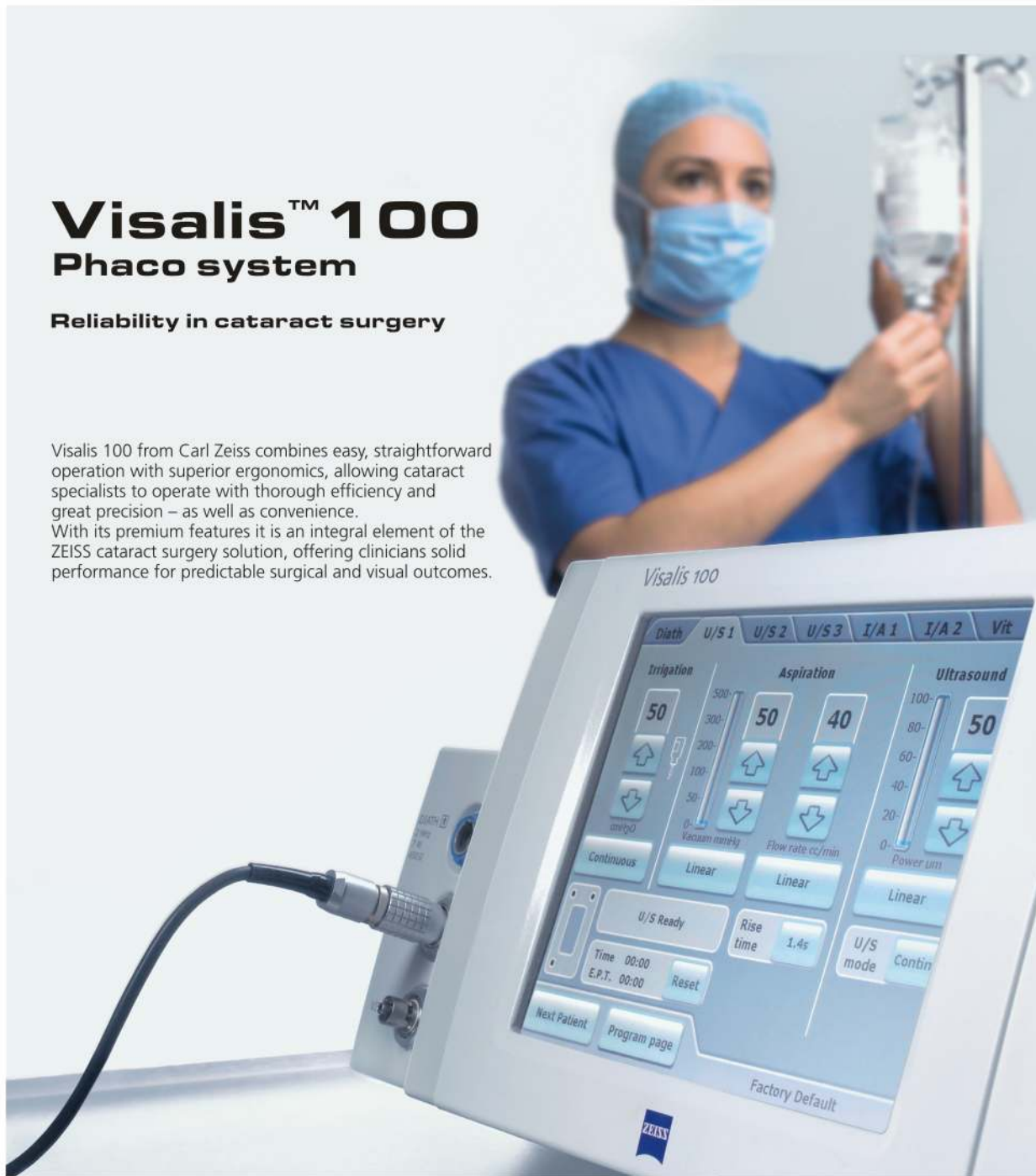


Grossly dislocated cataractous lens taken out through an open incision with the help of cryo probe. A triangular iris claw lens is implanted . A peripheral iridectomy is done to avoid pupil block . Incision line closed with steel sutures

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CASE PHOTOS

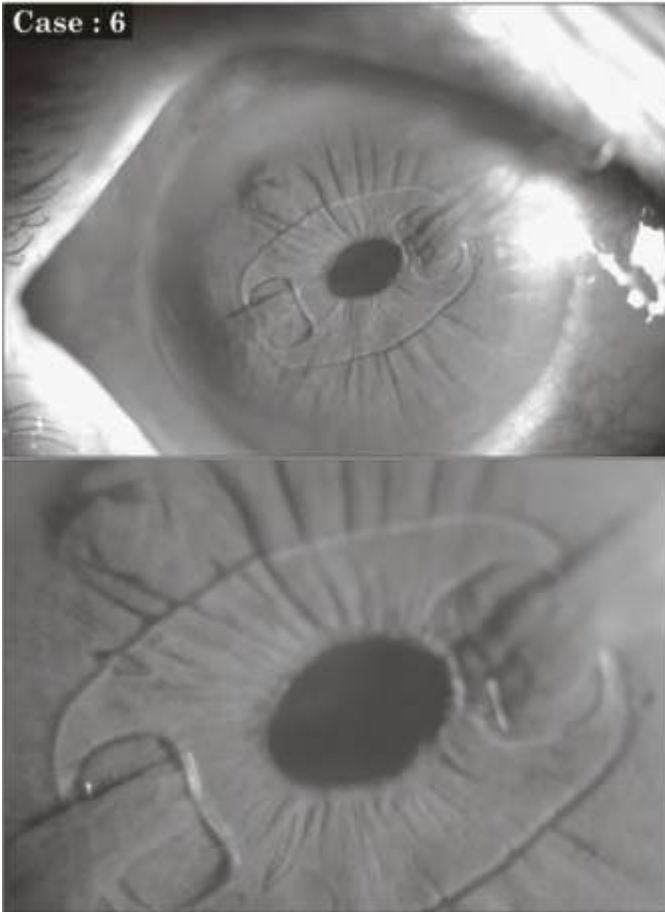
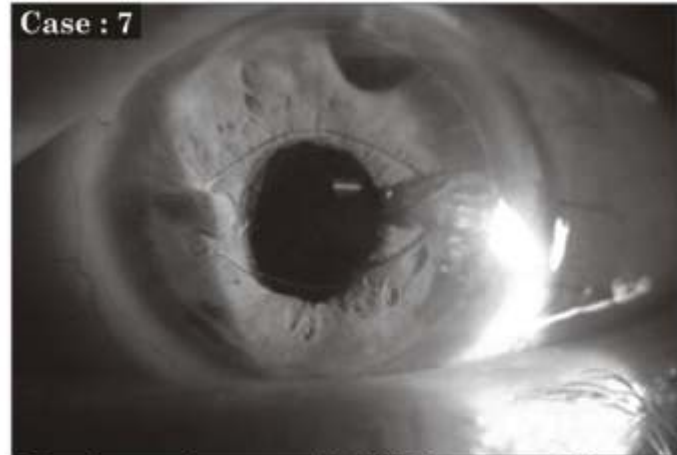
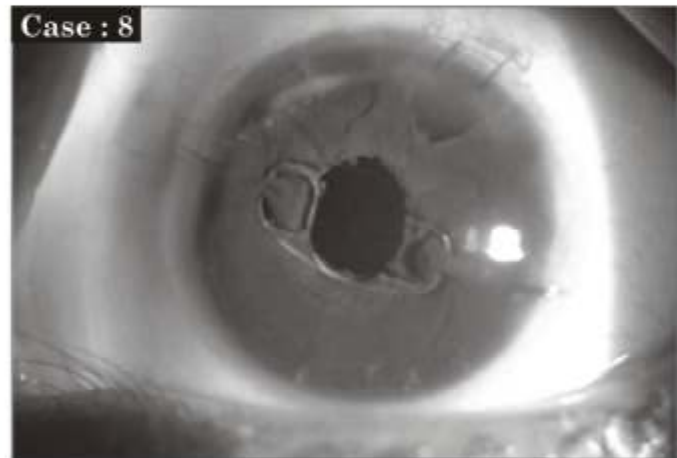


Photo clicked 4 hours after phaco surgery performed in a 85 years old one eyed lady with severe pseudoxfoliation. We use an oval CCC in such cases as it facilitates easy removal of the segments. Phaco was completed by inflating the capsular bag with the viscoelastic again and again. No capsular tension ring used. The capsular bag was found to loosely attached to the zonules and so posterior chamber lens was not the ideal choice to be used in the bag or in the sulcus. A small sized iris claw with dimensions of 5.5 × 3.5 mm implanted after constricting the pupil. An iridectomy is mandatory to avoid pupil block. The magnified photo shows pseudoxfoliation material attached to the pupillary margin. No anterior vitrectomy was done



Post lens exchange and DSEK. Uncorrected Vn 6/6.



Aphakia in a 4 year old child with microcornea (8.5 diameter). A small sized iris claw lens with dimensions 2mm in to 4mm implanted after removing the vitreous mushroom with a vitrector



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