DISCUSSION
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Cataract extraction technique has come a long way since the traditional intracapsular cataract extraction by Charles Yves in 1722 to extracapsular cataract extraction with IOL implantation by Harold Ridley in 1949.

With advances in microsurgical techniques and surgeons gaining more confidence in IOL implantation, the contraindications to IOL implantation are becoming fewer.

In the study the sex distribution was in the favour of males in both the study groups and majority were placed in the age group of 50-60 years as evident in Tables II and I respectively. The probable cause of such ratio is that the social set up is such that the female patients in general do not attend the hospitals.

The preoperative evaluation of astigmatism by Bausch and Lomb keratometry showed that in both groups A and B majority of patients had astigmatism <Idioptres. \( \{ \text{Group A 18 (60\%)} \) and Group B 21 (70\%)} \) as is evident in Table III.
The average keratometric values preoperatively were -

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The preoperative keratometric evaluation showed that there was a dominance of with-the-rule astigmatism in both the study Groups (Table IV).

The preoperative Snellens visual acuity was hand movement in 10% cases. Less than 6/60 in (33.33%) and between 6/60 to 6/36 in majority (56.67%).

On an average larger number of patients (48%) accepted 21.5 D IOL implant as compared to 26% who received 22D IOL as calculated by A Scan biometry and application of SRK II formula for IOL power calculation.

Post operative evaluation of induced astigmatism by keratometry showed that there was a relatively higher
astigmatism associated with large sutured incision on 2, 4 and 6 weeks as compared to a lower astigmatism in sutureless surgery. A greater number of patients had induced astigmatism in the range of 1-2 dioptres in the first group while in the second group there was a relatively lower induced astigmatism with larger number of patients having less than 1 dioptres induced astigmatism at 6 weeks.

Anden matter (1991) et al and Mafra (1996) et al had also in their study concluded that a large corneal incision produced a larger induced astigmatism.


Similar results confirming to the present study were seen by Holwega (1997) and Heinrich (1994) et al.

There was good stabilization of astigmatism in Group B (Small incision) in the present study at 6 weeks with very good aided visual acuity. Oshika (1995) et al also explained an early stabilisation of sutureless small incision.
There was a trend of change in astigmatism towards against the rule in both the groups with larger number patients reaching neutrality in group B (33.33%) as indicated in Table XI. Vass and Menapace\textsuperscript{22} (1997) in their study found consistent horizontal steepening in small incision group and vertical flattening was seen by Veronica M. Reading\textsuperscript{32} (1984) with large incision.

Comparison of Data concerning the effect of section size provides a clue to surgical control of astigmatism.

In group B where a smaller incision away from the corneal was made it was the curvature of the vertical meridian which became flatter as seen by keratometric evaluation.

In group A where a larger section was made at the limbus the curvature of the horizontal meridian became steeper. Similar results were seen by Veronica M. reading\textsuperscript{32} (1984)

In both the groups the final visual acuity after spectacle correction was comparable at 6 weeks (Table VII). El Meghraby's\textsuperscript{3} (1993) study of small incision surgery showed that
at two weeks post operatively it was better in the smallest incision.

Thus we conclude that extra capsular cataract with IOL implantation using scleral tunnel incision is safe and more effective method giving good visual outcome and lesser post operative astigmatism, recovery is faster and is quite useful in India where hard cataracts are common.