The present study was conducted to see pattern of posterior capsular opacification. Posterior capsule opacification (PCO) is the post-operative complication which occurs after cataract surgery, causes significant deterioration of visual acuity & its incidence is about 18%-50%. The maximum number of PCO cases were in the age group of 61-70 years i.e 57%, males were 53%, Capsular fibrous variety was seen in 83%. About grading 55% patients had Grade 1+ PCO followed by Grade 2+ which was 35%. PCO is mostly seen in the age group of 61-70 years with males preponderance having fibrous variety commonest & varying grades of PCO required laser capsulotomy.

ABSTRACT
Background: Posterior capsule opacification (PCO) is the post-operative complication which occurs after cataract surgery, causes significant deterioration of visual acuity & its incidence is about 18%-50%

Aims: The present study was conducted to see pattern of posterior capsular opacification.

Materials & Methods: The present prospective observational study involved 100 patients who developed posterior capsular opacification after extracapsular cataract extraction. PCO was diagnosed by using slit lamp bio-microscopy & direct ophthalmoscopy with dilated pupil.

Results: The maximum number of PCO cases were in the age group of 61-70 years i.e 57%, males were 53%, Capsular fibrous variety was seen in 83%. About grading 55% patients had Grade 1+ PCO followed by Grade 2+ which was 35%.

Conclusion: PCO is mostly seen in the age group of 61-70 years with males preponderance having fibrous variety commonest & varying grades of PCO required laser capsulotomy.

KEYWORDS
Cataract, ECCE, Grades & Types of PCO, Posterior Capsular Opacification.
made; Maximum number i.e 57% of PCO cases were in the age group of 61-70 years followed by 26% in 50-60yrs. Mean age of studied patients was 64.6± 6.62 years (Table no.1).

53% were males & 47% were females. The male : female was 1:0.89. (Table no. 2)

83% cases were fibrous variety while Elschnig's pearls were in 17%. (Table no.3)

PCO was of varying grades, 55% had Grade 1+ PCO, 35% Grade 2+ and 10% had Grade 3+ PCO respectively. (Table no.4)

Discussion:
The modern extra-capsular cataract surgery techniques has the most common long term complication called as "secondary cataract" or posterior capsular opacification (PCO) which is one of the most common cause of decrease in postoperative vision which is non-refractive.

In the present study, the majority of patients presenting with posterior capsule opacification belonged to age group of 61-70 years i.e 57% followed by 26% in 50-60yrs. Sridharro and Badrinath SS observed maximum number of patients in the age group of 41-60yrs. Singh et al found that maximum number of patients were in the age group of 41-60yrs in their study. (12) Ganvit et al in his study found that majority of patients 61% were in age group of more than 60 years while 33% were in 41-60 years. Most of the patients were in range of 41-80 years. This is perhaps the age at which the patients with age related cataract presents to ophthalmologists due to visual problem.

Mean age of studied patients was 64.6 ± 6.62 years in present study. Aslam TM et al. in his study found mean age was 75.2 yrs(52-90yrs). (13) Oner et al. found that mean age was 64±9.7yrs in one group & 63.0±8.4yrs in other group in his study. (14)

Out of 100 cases, 53% were males & 47% were females. Khan MY et al in his study found that, 67.2% were males whereas females were 32.8%. This is due to reason that female population less commonly undergo surgery for cataract or present to hospital for their reduced vision after surgery. (15) Bari KN also found that 40 were male and 30 were female in a study. (16) Gopinath GS et al in his study found that 62% cases were male while 38% were female. Gore VS in his study found male patients were 61.5% and females were 38.5%. (17)

In the present study, 83% eyes had fibrous type of posterior capsular opacification followed by 17% eyes with Elschnig's pearls. This is similar to the findings reported by Nagamoto T et al who found higher incidence of fibrosis type of PCO in early postoperative period. Elschnig's pearls were reported late in postoperative period (months to years). (18) A pilot study by Chowdry S et al also reported higher incidence of 13% of fibrosis type of PCO as compared to pearl type of PCO (1.5%) which is consistent with our study. (19) Similar findings have been reported by Hayashi K et al who reported incidence of capsular fibrosis more in early postoperative period. (20) Ganvit S et al in his study found that 57% had capsular fibrosis while Elschnig's pearls in 21%.

Bari KN also found that the predominant type of posterior capsule opacification was capsular fibrosis (57.04%) followed by Elschnig's pearls in 15 (21.4%). (21) Khan MY et al in his study also found that 62% cases were of capsular variety in his study. The predominant type of PCO was capsular fibrosis as shown by incidence of 57% in PCO. The main mechanism of postoperative PCO is proliferation and migration of lens epithelial cells onto the posterior capsule, equatorial epithelial cells undergo fibro-metaplasia, causing fibrosis of posterior capsule while due to anterior subcapsular epithelium migration on to the posterior capsule Elschnig pearls formation occurs & appear like bladder cells. (22)

Out of 100 eyes in present study, 55% had Grade 1+, 35% Grade 2+ & 10% had Grade 3+ PCO respectively. Prajna NV et al who in their study on 1,474 patients found that 81.9% had Grade 1, 8.6% had Grade 2 while Grade 3 posterior capsular opacification was seen in 0.5% eyes, one year after surgery. (23) Satelaha A et al in her study on 500 eyes, 408 had Grade 0 and 92 had PCO of varying grades. Out of 92, Grade 1+ PCO was seen in 55.47% cases, Grade 2+ in 34.78% & Grade 3+ opacification was observed in 9.78% of patients. (24)

Conclusion:
From present study, it has been concluded that PCO is mostly seen in the age group of 61-70 years, fibrous variety is the most common, males affected more, varying grades, i.e. Grade 1+, Grade 2+ & Grade 3+ PCO required laser capsulotomy.

Acknowledgement: Thanks from the core of my heart to GOD and my parents for their blessings.

Declaration:
Funding: No funding sources Conflict of interest: None declared Ethical approval: The study was approved by the institutional ethics committee.

Table no. 1 Age distribution

<table>
<thead>
<tr>
<th>Age (in years)</th>
<th>Number of patients</th>
<th>Percentage (%)</th>
</tr>
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<tbody>
<tr>
<td>&lt; 50</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>50-60</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>61-70</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>71-80</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>&gt;80</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Mean age of patients was 64.6 ± 6.62 years

Table no. 2 Sex distribution

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number of patients</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>53</td>
<td>53</td>
</tr>
<tr>
<td>Female</td>
<td>47</td>
<td>47</td>
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</table>

Table no. 3 Type of Posterior Capsular Opacification

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of patients</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elschnig Pearls</td>
<td>17</td>
<td>17</td>
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<tr>
<td>Fibrosis type</td>
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<td>83</td>
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</table>

Table no. 4 Grades of Posterior Capsular Opacification

<table>
<thead>
<tr>
<th>Grades</th>
<th>Number of patients</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1+</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Grade 2+</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Grade 3+</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

References:
15. Chowdry S, Sinha RK. Primary aqueous humour against PCO. A pilot study.