Less-Than-Perfect Outcomes After Uneventful Cataract Surgery
What Are We Missing?
Corneal Pathologies Responsible For Subnormal Visual Recovery

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• Consultant (ad hoc)
  • Allergan
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  • Tissue Banks International

Corneal Pathologies Responsible For Subnormal Visual Recovery
• Corneal dystrophies
  • Epithelial basement membrane corneal dystrophy (EBMD)
• Corneal degenerations
  • Salzmann nodular degeneration
  • Keratoconus
• Pterygia
Corneal Pathologies Responsible For Subnormal Visual Recovery

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Visually Significant EBMD
Preoperative Topography

Visually Significant EBMD
Postoperative Topography
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Table 2: Preoperative outcomes: complications and incidence

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Parameter</th>
<th>Pre-op</th>
<th>Post-op</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td></td>
<td>42</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Infection rate</td>
<td></td>
<td>–</td>
<td>20.2 ± 0.88</td>
<td></td>
</tr>
<tr>
<td>CDH (median, range in millimeters)</td>
<td>0.18 (0.03-0.4)</td>
<td>0.19 (0.10-0.25)</td>
<td>0.202</td>
<td></td>
</tr>
<tr>
<td>Topographic astigmatism (median, range in diopters)</td>
<td>5.7 (4.5-11.8)</td>
<td>4.8 (2.4-6)</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td>Refractive astigmatism (median, range in diopters)</td>
<td>14.6 (10.1-23.5)</td>
<td>8.0 (3.1-3.2)</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>Ectasia reappearance</td>
<td>45 (10%)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgically induced subepithelial haze at last follow-up</td>
<td>–</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table footnote: SD = standard deviation; CDH = corneal thickness; visual acuity; Mann-Whitney rank test; *p value < 0.001; **p value < 0.05. Follow-up range: 3-24 months.
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Pterygia
Preoperative Topography

Pterygia
Postoperative Topography

Pre-Op Ave K  43.25  45.48
Post-Op Ave K  44.77  44.50
Δ Ave K      +1.52  -0.98
Corneal Pathologies Responsible For Subnormal Visual Recovery

Conclusions
• Corneal topographic imaging should always be obtained prior to cataract surgery in:
  • Central EBMD
  • Salzmann’s nodular degeneration
  • High, asymmetric or atypical astigmatism
  • Pterygia
• Corneal topographic imaging should always be obtained after cataract surgery to evaluate suboptimal visual recovery

Thank You
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