Phaco in small pupil

By
Dr. Nour El Din Abdel Hamid
M.B.B.CH, M.Sc, MD
Lecturer in
ophthalmology department
Al-Azhar University
Cairo
Small pupil

- Represents a great challenge in phaco surgery.
- It is relative C.I for inexperienced phaco surgeon
- It should be anticipated in the preoperative examination by the dynamic & static methods
Causes of small pupil

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM</td>
<td>Metabolic changes &amp; rubeosis</td>
</tr>
<tr>
<td>PEX</td>
<td>Iris Dilator &amp; sphincter atrophy</td>
</tr>
<tr>
<td>IFIS</td>
<td>Dilator muscle atrophy</td>
</tr>
<tr>
<td>Age related</td>
<td>Iris atrophy</td>
</tr>
<tr>
<td>Post synechia</td>
<td>Uveitis, ACG, Previous surgery</td>
</tr>
</tbody>
</table>

Technical challenges:

- ↓ red reflex
- ↑ risk of Iris damage & prolapse
- ↓ size of rhesis
- ↑ Risk of residual cortical material
- Inadequate positioning of the in bag IOL
Step-wise approach in management of small pupil

A. Preoperative: NSAID, Tropicamide, cyclopia & phenylepherine

B. Intraoperative

- Interacameral injection of phenylephrine / Adrenaline
- Viscodilatation
- Posterior synechiolysis
- Pupil stretching technique
- Pupil expander devices

Preoperative pupillo dilatation
Interacameral injection of Adrenaline

Viscodilatation
Synechiolysis

Stretching pupil Technique
Phaco in small pupil

Pupil expanders
Phaco in small pupil with Iris hooks

Take home massage

Always try to do phaco in even small pupil.

Be patient & always expect the unexpected.
Thank you