Adopting and Implementing Laser Cataract Surgery Into Practice

Drs. LaBorwit & Stutman have no financial interests to disclose.

An Evolving Definition of Cataract

The Changing Face of Cataract Surgery

The Baby Boomer Generation

- Large, rapidly growing demographic
- Educated, financially secure
- Increased life expectancy
- Longer working careers
- Demand high quality vision (reading, distance, night vision)
- New requirement for near vision (computers)
- Unwilling to compromise active lifestyle

Embracing demand driven healthcare

The Need for Improvement

Limitations of traditional Cataract Surgery

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<th>Key Sites</th>
<th>Current Surgery</th>
<th>Impact</th>
<th>Safety Impact</th>
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<tr>
<td>Corneal Incision</td>
<td>Not Optimized</td>
<td>Induced-Cylinder</td>
<td>Infection</td>
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<tr>
<td>Capsulotomies</td>
<td>Variable Sided, Not Centered</td>
<td>Variable IOL Position &amp; Effective Lens Power</td>
<td>Capsular Tears, Posterior Capsule Opacification</td>
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<tr>
<td>Lens Implantation</td>
<td>Excessive Ultrasonic Power</td>
<td>Diffracted Visual Acuity</td>
<td>Lens or Endothelial Cell Capsule Reaction</td>
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Goals

- Safety
- Precision
- Accuracy

Image-Guided Refractive Cataract Surgery

FS Laser Corneal Incisions

- Customized wound architecture and placement
- Self-sealing incisions

Image Guided Cataract Surgery

Capsulotomy
**The key to highly accurate IOL power calculation is being able to correctly predict ELPo for any given patient and IOL.**

ELPo for the 5 formulas commonly in use are:

- **SRK/T d = A-constant**
- **Hoffer Q d = pACD**
- **Holladay 1 d = Surgeon Factor**
- **Holladay 2 d = ACD**
- **Haigis d = a0 + (a1 * ACD) + (a2 * AL)**

ELPo is assumed value, from empirical data (A constant and surgeon factor).

A significant source of IOL power error and key to post surgery refraction.

Size of capsulorhexis effects ELPo.

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**LenSX® Laser Phacofragmentation**

- Cylinder pattern, utilized for the softer lens, enables removal with I & A only, no phaco power
- Chop pattern efficiently fragments the lens for removal with reduced phaco power and time.

**Manual Arcuate Incisions**

- Manually executed by "tracing" corneal marks with handheld diamond knife
- Inconsistent depth control
- Unpredictable effect due to imprecise wound architecture and depth
- No image-guided surgical planning or visualization

**Laser Arcuate Incision**

- Square edge
- Uniform depth (no ripples)
- Precise, reproducible
  - Arc shape
  - Arc length
  - Diameter

**Benefits to Patient**

- Customization with 3D imaging
- High tech, premium experience
- Laser precision
- Gentle approach
- Faster visual recovery
- Less post-op restrictions
Laser Cataract Market

- >350 lasers in 52 countries
- >100,000 procedures
- More than 2000 surgeons trained
- 4 platforms available in US
  - Each surgeon should research what’s best for his/her practice
  - Healthy industry worthy of significant investment

Adopting New Technology

Half of what we do and learn today will be obsolete in 10 years; the trick is knowing which half.

Factors to Consider (in order)

- Patient benefit
- Physician comfort
- Economic considerations
- Workflow adjustments

Patient Benefits

- Safety
- Precision
- Accuracy
Physician Considerations

- Surgical workflow
- Comfort
- Buy-in
- Ability to make recommendation

Economic Considerations

- Break even analysis
- Purchase/Lease
- Service contract
- Per use fee
- Staffing considerations
- # procedures per month
- How many years to break even?
- Are all partners comfortable with this?
- Consider separate LLC
- Roll on laser options

Adjusting Workflow

- Surgery Center
  - # of operating rooms
  - Where will the FS Laser be located?
- Office Infrastructure
  - What is your current cataract volume?
  - Do you already offer Premium IOLs?
  - Is there a comfort level with discussing and collecting for non-covered services?

Implementing Laser into Practice

- More than just making room in the OR
- Every aspect of operation is a key component
  - Patient education
  - Office staff
  - Referring doctors
  - ASC staff

Patient Education

- Already think cataract surgery is “laser surgery”
- Explain the procedure in the exam lane, including why you like this technology
- Make the medical recommendation
- Never discuss cost in the exam room
- Including “insurance doesn’t cover this procedure”

Office Staff

- Sometimes it’s hard for the surgeon to not operate in a silo.
- Important to bring the office staff into the loop and be on board.
- Staff needs to know why this is exciting.
- Enthusiasm is contagious.
- Share yours with the staff and they will be your ambassador to the patients.
- Bring your office staff to the OR to get the “full patient experience”
Referring Doctors

- Also need to be educated on new technology
- Need to understand the patient experience in your office
  - Invite docs to observe office workflow
  - Invite docs to observe surgical workflow
- Assist referring docs in formulating message to patients:
  - Patients will have choices to make when scheduling surgery

ASC

- Initial operational challenges incorporating LenSx® Laser into surgical workflow
- Important to have laser that could accommodate surgical stretcher
- Sedation challenges
- Scheduling challenges
- Our workflow

Questions?

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