



Argon Laser Peripheral Iridoplasty

By

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- Argon Laser peripheral iridoplasty (ALPI) is a simple and effective means of opening closed angle in **acute congestive glaucoma** or for **persistant angle closure after iridotomy** has eleminated a pupillary block component.

Anatomic Basis of Angle Closure

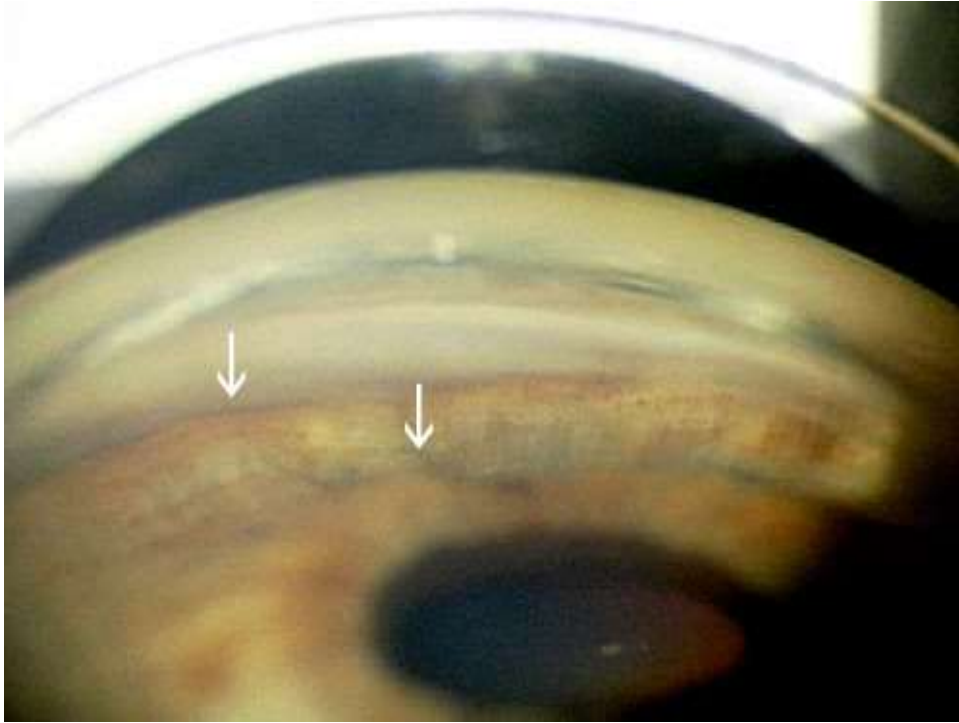
- The forces causing iris apposition to the meshwork originating at 4 anatominal levels:
 1. Posterior chamber (pupillary block)
 2. Ciliary body (plateau iris)
 3. lens (phacomorphic glaucoma)
 4. Posterior to the lens (mailgnant glaucoma).

Indications of ALPI

- **Acute angle closure**
 1. Medically unbreakable attack
 2. Primary treatment
- **Persistent appositional angle closure:**
 1. Plateau iris syndrome
 2. lens related angle closure
 3. Malignant glaucoma

N.B: ALPI does not break PAS

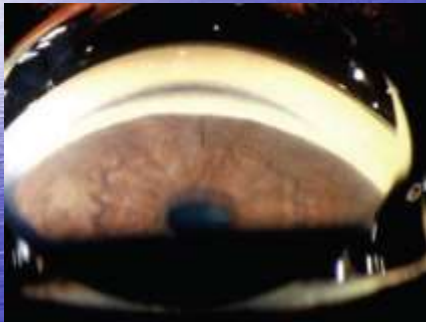




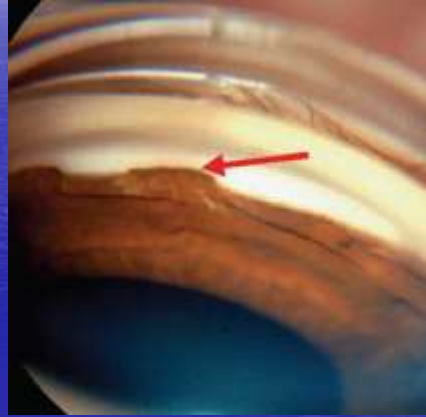
Indentation Gonioscopy

Appositional angle closure

Angle opened after indentation



- **Peripheral anterior synechia (PAS)**



ASOCT of a patient with appositional angle closure inspite of patent LPI.



After ALPI the iris flattened and the angle recess opened.



ALPI Technique

- Pretreatment with 2% pilocarpine twice
- Brominidine prelaser to prevent IOP spike
- Topical anesthesia eye drops
- Abraham iridotomy lens



ALPI Technique

- Laser parameters
- **500-1000** micron spot size (brown irides) or 200 microns (lighter irides)
- **0.5** second duration
- Power start from **100-150** mW (brown irides) or 200-300 mW (lighter irides)



ALPI Technique

- Laser aimed at the most peripheral portion of iris possible
- **20-24** spots over **360** degree
- The **end point** is peripheral iris retraction and slight deepening of the AC at point of application



ALPI Technique

- Laser power **increased** if there is no contraction
- Laser power **decreased** if there is bubble formation, iris charred, pigment released into AC or pop sound



Post-laser care

- Monitor IOP for spike
- Topical steroids qid for 1 week



Repeating ALPI

- IF ALPI to be repeated after recurrence of appositional closure, it is possible to place the contraction burns further peripherally than had been initially positioned .
- Use longer duration 0.7 second



Complications

1. Pop and pigment : turn power down
2. Inflammation: postoperative topical steroids
3. postoperative IOP spikes : not recorded
4. Iris necrosis



Conclusions

- ALPI is a simple ,safe and effectively opens appositional angle closure
- ALPI does not replace iridotomy
- Usefule in :
 - APACG
 - Lens related angle closure
 - Plateau iris syndrome
 - Secondary angle closure with no PAS
- ALPI is not working in PAS

