OPTOMETRISTS AND DISPENSING OPTICIANS BOARD
Te Poari o ngā Kaimātai Whatu me ngā Kaiwahakarato Mōhiti

Appendix 2A

Supporting documentation for Ophthalmic Laser Surgeries Pilot

Neodymium-doped yttrium aluminium garnet Nd:YAG laser capsulotomy

Laser capsulotomy is a treatment for posterior capsular opacity (PCO) that occurs follows cataract surgery with intraocular lens implantation. Depending on density and proximity to the visual axis, this opacification can reduce visual acuity and contrast sensitivity, and increase sensitivity to glare.[1] While incident rates are decreasing due to increased understanding and mitigation of risk factors,[2] PCO remains the most frequent complication following cataract surgery.[3] Unlike other surgical complications, the onset of PCO can be delayed by months to years,[4] meaning that the patient is usually discharged from the care of the cataract surgeon. PCO itself presents a low risk of permanent visual morbidity, but since the treatment can be performed in an inpatient setting in front of a slit lamp, delayed treatment leads to unnecessary vision reduction in an older and more vulnerable population. As the procedure adds energy to the eye, particularly at the anterior vitreous face,[5] complications such as retinal detachment, IOL damage, and cystoid macular oedema can occur.[6] Fortunately, complication rates following laser capsulotomy are low, but as the frequency of treatment for PCO is high, this means that a practitioner must always be selective and diligent when performing the surgery.

Prior to performing the procedure in vivo, the optometrist must first demonstrate competence in the theoretical and procedural aspects of performing a capsulotomy, to the satisfaction of their nominated ophthalmologist.

1. A piece of paper with a mock lens capsule drawn on it can be secured to the head rest of the laser unit.
2. The laser power should be titrated in a single spot off the mock visual axis until observing the required photodisruptive effect.
3. Once the power is determined, a mock capsulotomy should be applied using the appropriate power, duration, repetition, etc. This mock capsulotomy should be performed under supervision, until the nominated ophthalmologist has confidence in the optometrist's ability to operate the laser safely.
4. A variety of mock posterior capsular opacification presentations should be presented to ensure an appropriate technique is applied in each case, each to the satisfaction of the nominated ophthalmologist.

5. The nominated ophthalmologist may use this opportunity relate theoretical knowledge of the procedure and anatomy to the clinical presentations.

Once the required level of knowledge of the theoretical and procedural components of the technique has been obtained to a level deemed satisfactory to the nominated ophthalmologist, the optometrist should directly observe the nominated ophthalmologist perform a **minimum** of 20 capsulotomies to ensure that their knowledge can be applied to real-world examples.

This stage requires completing a logbook (Appendix A) that must be submitted for the Board's approval.

6. These cases should be interactive and probe the optometrist's knowledge and clinical decision making during each case. Note that in considering the patient's best interests, this discussion may take place once the consultation has finished.
7. At a minimum, pre and post treatment binocular views should be obtained on the slit lamp. Ideally, the entire procedure would also be followed through a teaching tube or video capture.
8. Selection of the laser parameters and target areas should be discussed with the optometrist, in addition to cautionary features of the treatment and recognition of potentially difficult cases.
9. Particular attention should be made for cases where higher laser powers may be required, or unique or complex cases which may require consultation or referral to an ophthalmologist.
10. The optometrist is required to keep a record of each case (Appendix A), including the clinical presentation, laser settings, surgical procedure, and immediate patient outcomes.
11. Once at least twenty cases have been observed, the nominated ophthalmologist must co-sign the logbook with the optometrist to declare that all training has been completed to a standard to which they are satisfied.
12. The nominated ophthalmologist must also sign and date the progress log (Appendix B).
13. Before proceeding to perform the procedure themselves, the logbook must be submitted and approved by the Board. This provides an additional opportunity for discussion of any of the cases.

Once the Board has given approval of the training logbook for the observed procedures, the optometrist may proceed to conducting the procedure themselves.

14. Patients must be made aware of the training nature of the procedure and give appropriate consent by signing an Agreement to Treatment (Consent) Forms prior to the practitioner undertaking the laser procedure.

15. The Consent Form should document the title and position of the practitioner being trained and that patients have been made aware that they are in training under direct supervision.
16. Feedback is given to the optometrist either during or immediately after the observed treatment.
17. A detailed log of the cases, including feedback from the nominated ophthalmologist, must be recorded in a logbook (Appendix A) similar the observation logs completed previously.
18. After a **minimum** of 20 directly supervised surgeries, if the nominated ophthalmologist believes that the optometrist can independently, competently, and safely complete the procedure, this logbook should be signed off.
19. Additional questioning, such as more complex 'What-if?' type scenarios can be used to help the nominated ophthalmologist obtain the required level of confidence in the optometrist
20. The nominated ophthalmologist must also sign and date the progress log (Appendix B).
21. The signed-off logbook and progress log should be submitted to the Registration Board (ODOB) and must be accepted by the Board before the practitioner can independently perform the surgery.
22. On-going approval from the Board is contingent on a suitable work environment, a satisfactory nominated ophthalmologist being available, and meeting the auditing requirements set out for continuing competency in each procedure.

References

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