

CRYOTHERAPY FOR RETINAL BREAK, LATTICE DEGENERATION, OR LIMITED RETINAL DETACHMENT

ERIC S. MANN M.D., Ph.D.

A. INTRODUCTION:

Retinal break is an opening on the retina, usually located at the periphery. It may be a hole or a tear. Without treatment, some retinal breaks may lead to retinal detachment (separation of the nerve tissues from the normal position in the back of the eye). Lattice degeneration is a weak spot on the retina, which may lead to retinal detachment. Certain types of lattice degeneration need treatment. Limited retinal detachment usually has shallow fluid and involves a small area.

B. METHOD:

The “cold energy” delivered by a “cryo probe” is placed on the outer wall of the eye, corresponding to the location of the break, lattice, or limited retinal detachment. Anesthesia (pain control) is achieved by local injection around the eye or retrobulbar injection (placement of anesthetics behind the eye).

C. BENEFITS:

Cryotherapy seals the break or lattice degeneration in an attempt to prevent retinal detachment. However, in spite of treatment, some break or lattice may progress to a detachment. Similarly, attempts to seal down limited retinal detachments can prevent further enlargement of the retinal detachment. However, it is not “foolproof”. Certain limited retinal detachments may progress after treatment.

D. RISKS AND COMPLICATIONS:

1. Common:

- a. Redness and swelling of the eyelid and the front tissues of the eye. This usually lasts for a few days to a few weeks.
- b. Temporary pain and discomfort which can be controlled by medications.
- c. Floaters.
- d. Glare and sensitivity to light.
- e. “Flashing light”.
- f. Temporary inflammation.
- g. Mild drop in vision (usually temporary).

2. Uncommon:

- a. Hemorrhage (bleeding).
- b. Cystoid Macular Edema (CME): swelling of the reading center.
- c. Scar tissue formation on the surface of the reading center.
- d. Marked visual deterioration.

3. Other potential complications and risks not listed here may be discussed by the doctor.

E. ALTERNATIVES:

Laser treatment is the use of concentrated light beam to treat retinal break or lattice.

F. POST-TREATMENT COURSE:

Minimal restriction is required unless otherwise specified. The eye is patched for 24 hours after treatment if retrobulbar anesthesia is used.

PERIBULBAR & RETROBULBAR ANESTHESIA

Absence of pain (anesthesia) and immobilization of the eye (akinesia) are often necessary to allow effective laser and cryotherapy treatment or intraocular surgery. Both anesthesia and akinesia can be obtained to a variable degree by injection of anesthetic (Lidocaine and/or Marcaine) around and behind the eyeball prior to treatment or surgery.

The following are **common** effects of the anesthetic injection but are usually temporary:

1. Blurring of vision
2. Numbness and swelling around the eye
3. Ptosis (drooping of the eyelid)
4. Diplopia (double vision)

The following are **uncommon** complications of the anesthetic injection:

1. Retrobulbar or periorbital hemorrhage (bleeding behind or around the eyeball)
2. Globe perforation (puncture of the eyeball by the needle used for anesthetic injection)
3. Optic nerve injury or vascular damage (central retinal artery or vein occlusion)
4. Allergic reaction to the anesthetic
5. Seizure
6. Cardiorespiratory arrest (death)
7. Bilateral akinesia

These uncommon complications may result in permanent loss of vision, need for further surgery or treatment, or loss of the globe. Other less common complications may be discussed as well.

Post treatment care may include applying ointment to the eye and wearing a patch for 24 hours.

PROCEDURE NOTE

Patient: _____ **MR#:** _____ **Date:** _____

Surgeon: Dr. Eric S. Mann

Procedure: Cryotherapy _____

Indications: _____

Va: OD _____ OS _____

Informed consent: All the risks, benefits, alternatives and intent of cryotherapy treatment with anesthesia were presented to the patient in an extensive discussion and in written form(s) _____. The patient understood cryo treatment is performed not to improve vision but to prevent retinal detachment and further visual loss. The patient stated they had a good understanding of their clinical situation including the specific ocular and anesthetic risks (loss of vision, need for further surgery, and rarely loss of globe) and consented to cryo treatment.

Treatment: () Under topical anesthesia.
 () Under retrobulbar anesthesia: With the patient supine and fixating straight ahead, 3cc of 2% lidocaine was injected into the retrobulbar space using a #25 guage 1.5 inch needle and a 10cc syringe. Adequate anesthesia and akinesia was obtained. Following treatment the eye was patched for 24 hours.

A speculum was placed in the operated eye. cryotherapy was applied to surround the _____ which was extended to the ora under direct visualization. A total of _____ cryo spots were performed. There were _____ complications. The patient tolerated the procedure well and left in good condition.

Post-operative care & management: **Tylenol #3, Pred Forte qid & Hyoscine bid was prescribed for four days.** The patient was instructed to return in follow-up _____ or immediately upon any decreased vision, pain, side effects of meds, or symptoms of RD or RB (which was reviewed). Specific post-operative instructions included HOB elevated and restricted activities with no physical exertion.

RECEIPT OF POST-OP INSTRUCTIONS

I _____ have been given postoperative instruction information. I have had the opportunity to read, understand and ask questions regarding my planned surgical procedure(s). Dr. Mann has explained this procedure to me in depth. I have been informed in regard to the potential benefits, complications, risk and alternatives of the procedure. Sufficient time was allowed for me to ask questions and these questions were answered to my satisfaction.

Patient signature

Date

Witness signature

Date

**INSTRUCTIONS FOLLOWING LASER/CRYOTHERAPY
TREATMENT**

1. You may resume all of your normal activities immediately except for heavy lifting, exercise or physical exertion which you may resume in 3 to 4 weeks.
2. You may have discomfort or a headache following laser/cryotherapy treatment. Please take Tylenol but **NO** aspirin, Ibuprofen (Advil), indomethacin (Indocin) or other NSAIDS for pain unless your medical doctor recommends you take an aspirin a day for your heart or to “thin” your blood.
3. Due to intense brightness of the laser beam, there is a light-induced “dazzling” or “flashbulb” effect, and consequently your vision may be slightly decreased after the laser treatment. It may require a few hours to recover from this glare effect.
4. Please take pain pills as instructed and call immediately if you have persistent pain or sudden, new onset decreased vision at office phone number listed below or 866-856-7882 (after hours).
5. If you received retrobulbar anesthesia, keep the treated eye patched for 24 hours.
6. If you received eye drop prescriptions, please follow directions on the bottle.

**317 Salem Place Ste. 150
Fairview Hgts., IL 62208
Phone: (618) 632-8100
Fax: (618) 632-8101**

**533 Couch Ave., Ste 255
Kirkwood, MO 63122
Phone: (314) 835-9400
Fax: (314) 835-9401**

INFORMED CONSENT

I, _____ have been given the brochure(s) on cryotherapy for retinal break, lattice degeneration or limited retinal detachment and peribulbar & retrobulbar anesthesia.

I have had the opportunity to read, understand and ask questions regarding this procedure(s). Dr. Mann has explained this procedure to me in depth. I have been informed in regard to the potential benefits, complications, risks and alternatives of the procedure. Sufficient time was allowed for me to ask questions and these questions were answered to my satisfaction.

Patient signature

date

Witness signature

time

CONSENT SPECIAL/INFORMED TO SURGERY OR OTHER PROCEDURE

Name: _____

Date: _____

Medical record number _____

1. I hereby authorize Dr. Mann and / or such assistants, associates, or other health care providers that may be selected by him, to perform the following procedure (s)

CRYOTHERAPY FOR RETINAL BREAK OR LIMITED RETINAL DETACHMENT eye

2. Dr. Mann has discussed with me the procedure(s) listed above and the items of information that are briefly summarized below:
- a. The nature and purpose of the proposed procedure(s): cryotherapy seals the break or lattice degeneration, in an attempt to prevent retinal detachment
 - b. The risks and possible consequences of the proposed procedure(s), including the risk that treatment may not accomplish the desired objective(s) and including, but not limited to: redness and swelling of the eyelid, and the front tissues of the eye, temporary pain and discomfort, floaters, glare and light sensitivity, temporary inflammation, hemorrhage, swelling of reading center, scar tissue formation on the surface of the reading center, marked visual deterioration, loss of vision or need for further surgery.
 - c. All reasonable alternative treatment, including risks, probable effectiveness of each and consequences if this proposed treatment is not received:
Alternative treatment: laser photocoagulation
3. I am aware that, in addition to the risk specifically described in Item 2 above, there are other risks, such as severe loss of blood, infection, cardiopulmonary arrest, respiratory difficulties, injury to proximate/adjacent blood vessels, nerves, organs or structures, unanticipated allergic reaction to substances, pressure/position related injuries and other risks related to the performance of any surgical procedure.
4. I acknowledge that no guarantees have been made to me as to the results of the procedure(s) and am also aware that complications and risks may occur despite precautions.
5. I consent to the performance of unforeseen operation(s) and procedure(s) in addition to or different from those now contemplated and describe herein that the named doctor and his associates or assistants may deem necessary or advisable during the course of the presently authorized procedure(s).
6. I consent to the administration of such anesthetics as may be considered appropriate by the physician responsible for anesthesia administration or such assistants or associates as may be selected by him. I understand that this procedure is to be performed using **retrobulbar/topical** anesthesia. I understand that all types of anesthesia involve some risk. I further understand that if a regional, spinal or epidural anesthesia is planned, it may be necessary to also administer a general anesthetic. I understand that the risk of a general, spinal, epidural or regional anesthesia include, but are not limited to, mouth and/or throat pain or injury, cardiopulmonary arrest, cardiac arrhythmias, heart attack, respiratory difficulties, stroke, brain damage, headache, backache and other sensory, nerve, focal and systemic injuries.

7. I also consent to the administration of blood or blood components, drugs, medicines and other substances considered advisable by the physician(s) responsible for this procedure and the use of x-rays or other diagnostic testing, procedures and devices, which the above-named physician or his associates, consultants or assistants may consider useful.

8. I hereby authorize SureVision Eye Centers or staff to preserve for scientific or teaching purposes or to otherwise dispose of any tissues, parts, organs, or implants removed during this procedure.

9. For teaching or educational purposes, I consent to the admittance of students, staff or other observers to the operating and procedure rooms, and to the taking of any videos or photographs deemed appropriate or necessary by the physician in the course of the procedure(s). I also consent to the taking of photographs or videos for the purpose of documenting the condition or procedure in the medical record. I understand that if data, photographs, videos or other information are used for teaching/educational purposes or for scientific publication, that my (the patient's) identity will remain confidential unless otherwise authorized by the undersigned.

10. I certify that I have read or have had the above information read to me and that I understand the above consent to operation or diagnostic procedure, that the explanations referred to were made to my satisfaction and I hereby give my informed and voluntary consent to the proposed procedure(s) or operation(s).

Signature of patient:

If the patient is unable to give informed consent because of physical or mental incapacity or mental incapacity or is a minor (under 18 and unemancipated), complete the following:

Patient is unable to give consent because _____

:

Witness to signature

I certify that I have explained to the above individual the nature, purpose, risk and potential benefits of the above procedure and have answered any questions that have been raised.

Signature of Physician