

IN OFFICE PROCEDURES

Selina R. McGee, OD, FAAO

LUMPS AND BUMPS

LID LESION OVERVIEW

Benign Lid Lesions

- Chalazion
- Skin tag/papilloma
- Verrucae
- Seborrheic Keratosis
- Cyst of Moll & Zeiss
- Sebaceous Cyst
- Freckle/nevus

Precursors To Cancer

- Actinic Keratosis
- Keratoacanthoma

Cancer

- Basal Cell Carcinoma
- Squamous Cell Carcinoma
- Malignant Melanoma
- Sebaceous Gland Carcinoma



CHALAZION PATHOPHYSIOLOGY

Obstructed meibomian gland retains sebaceous secretions

May rupture and release lipid into surrounding tissue, causing granulomatous inflammation

Risk factors: Rosacea, blepharitis (meibomitis)

- Often previous episodes (but beware of same location!)



CHALAZION SIGNS & SYMPTOMS

Non-tender, firm lesion

Varying size

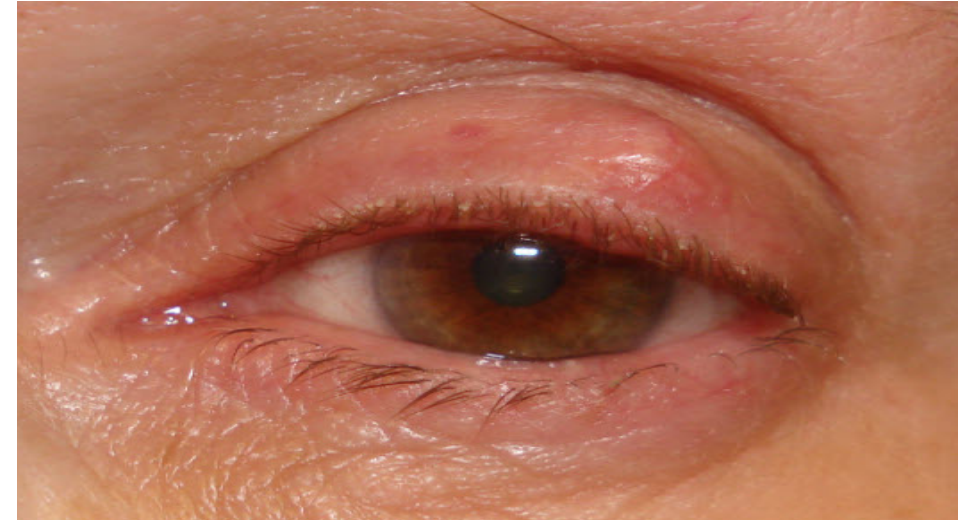
Time since onset varies

Generally contained within the tarsus

- Not easily moveable

No discharge with palpation

No lash loss



DIFFERENTIAL DIAGNOSIS

Hordeolum

Sebaceous Gland Carcinoma

Basal Cell Carcinoma

Squamous Cell Carcinoma

Molluscum

Epithelial inclusion cyst

Dermatitis

Insect bite

DIFFERENTIAL DIAGNOSIS

Hordeolum

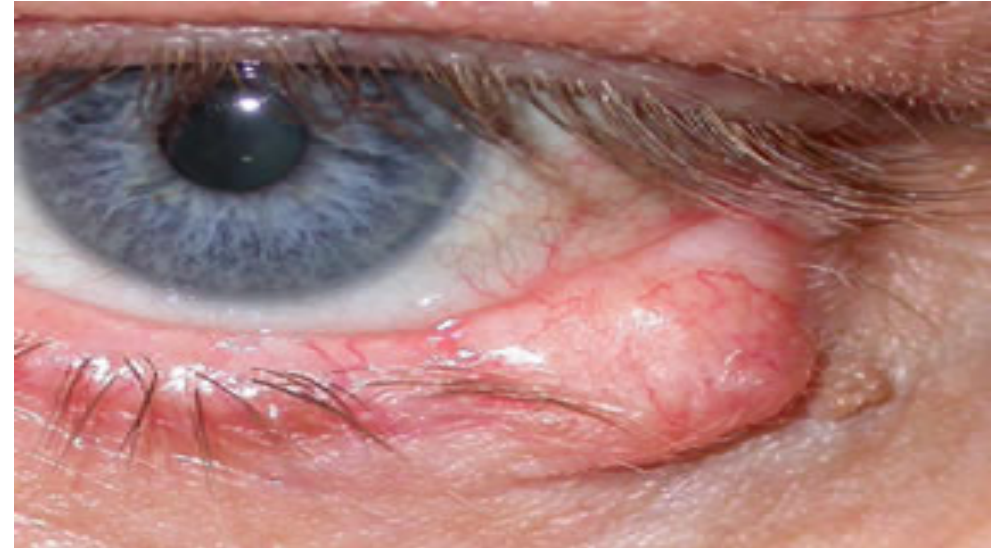
- Inflamed, tender
- May form chalazion after acute infectious phase resolves



DIFFERENTIAL DIAGNOSIS

Sebaceous Gland Carcinoma

- Must be considered with in cases of recurrent chalazia
- Strong tendency to metastasize
- Presentations are variable
 - Lash loss



DIFFERENTIAL DIAGNOSIS

Sebaceous Gland Carcinoma

- Variable presentations
- Be cautious!



DIFFERENTIAL DIAGNOSIS

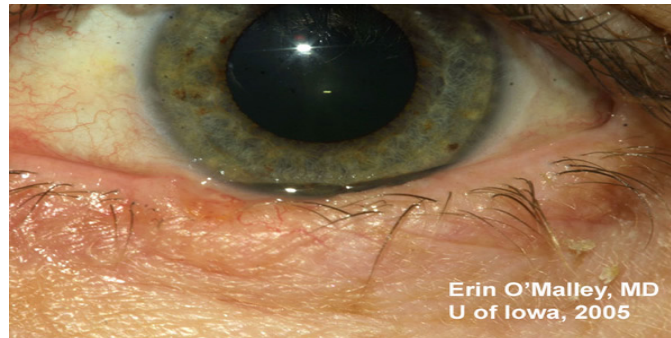
Sebaceous Gland Carcinoma



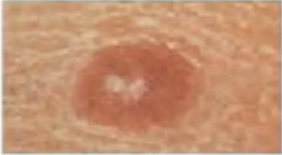


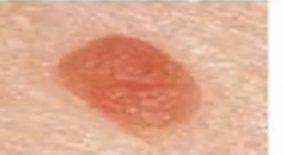





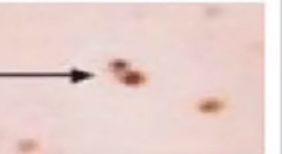
DIFFERENTIAL DIAGNOSIS

Basal Cell Carcinoma

- 90% of eyelid malignancies
 - Most commonly lower lid
- Ulcerated with raised, pearly borders
- Lash loss
- Rarely metastatic



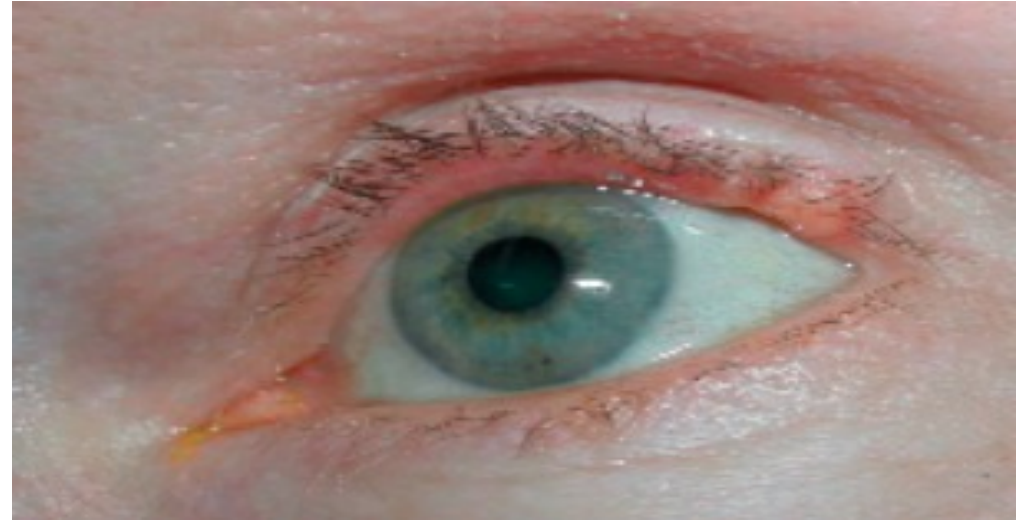
Malignant Eyelid Lesions: Malignant Melanoma

<u>The ABCDEs of Detecting Melanoma</u>					
	A Asymmetry	B Border	C Color	D Diameter	E Evolving
<u>NORMAL</u>	 <p>Symmetrical</p>	 <p>Borders Are Even</p>	 <p>One Color</p>	 <p>Smaller Than 1/4 Inch</p>	 <p>Ordinary Mole</p>
<u>MELANOMA</u>	 <p>Asymmetrical</p>	 <p>Borders Are Uneven</p>	 <p>Multiple Colors</p>	 <p>Larger Than 1/4 Inch</p>	 <p>Changing in Size, Shape and Color</p>

DIFFERENTIAL DIAGNOSIS

Squamous Cell Carcinoma

- 2nd-3rd most common eyelid malignancy (~5%)
- Variable presentations
 - Difficult to diagnose clinically
 - Nodular
 - Irregular rolled edges
 - Central ulceration



DIFFERENTIAL DIAGNOSIS

Molluscum Contagiosum

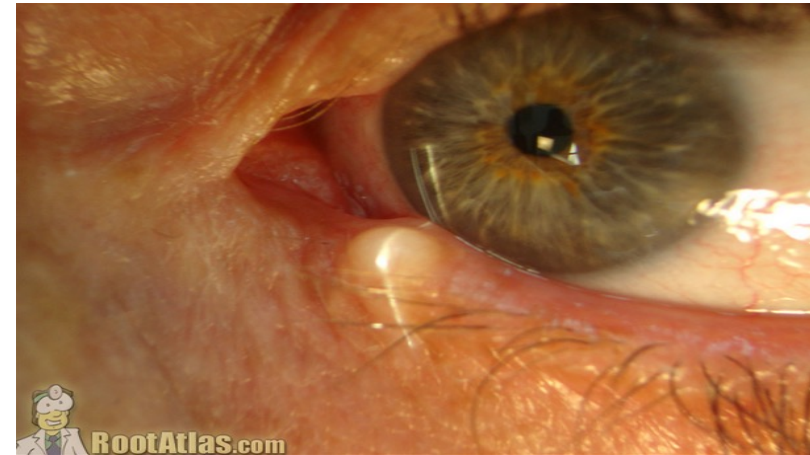
- Waxy, nodular appearance
- Central umbilication
- Viral cause



DIFFERENTIAL DIAGNOSIS

Epidermal Inclusion Cyst

- Benign
- Filled with keratin
- Excised and expressed
- Removal of intact cyst wall minimizes recurrence rate



DIFFERENTIAL DIAGNOSIS

Inflammation

- Dermatitis
- Insect bite

Itch

Soft edema



EXAMINATION AND HISTORY

Detailed history of chalazion

- Onset, growth, bleeding, **previous episodes**, itch, pain, history of cancer

Photodocument

Sign informed consent

- Risks, benefits, alternatives

Blood pressure/pulse

Visual acuity

Allergies?

CHALAZION TREATMENT OPTIONS

Medical (“Conservative”) therapy

Intralesional steroid injection

Incision & Curettage (I&C)

Intense Pulsed Light (IPL)

Important to educate the patient on every option

MEDICAL THERAPY

Specific approaches vary

- Warm compresses
- Lid Scrubs
- Doxycycline
- Topical antibiotic/steroid

Success rate?

- Literature varies
- Variation in practitioner preferences
- Likely 50-75% effective

MEDICAL THERAPY

Indications

- Frequently first line of treatment
- Small lesion (< 6 mm)
- Lesion present less than 6 months
- Lesion in medial aspect of lid near punctum
- Patient choice of treatment

Contraindications?

- If doxycycline is contraindicated

Risks and Complications



- Treatment failure
- Drug hypersensitivity

Clinical characteristics of *Demodex*-associated recurrent hordeola: an observational, comparative study

Sung Yeon Jun¹, Yeon Jung Choi¹, Bo Ram Lee¹, Sang Un Lee^{1,2} & Sung Chul Kim^{1,2}✉

Correlation between *Demodex* species in
primary and recurrent chalazia

Correlación entre especies del género
Demodex en chalaziones primarios y
recurrentes

[S. Diener-Kudisch](#)^a  , [L. Ramírez-Barajas](#)^a, [J.M. Perezpeña-Diazconti](#)^b, [Á. Nava-Castañeda](#)^a

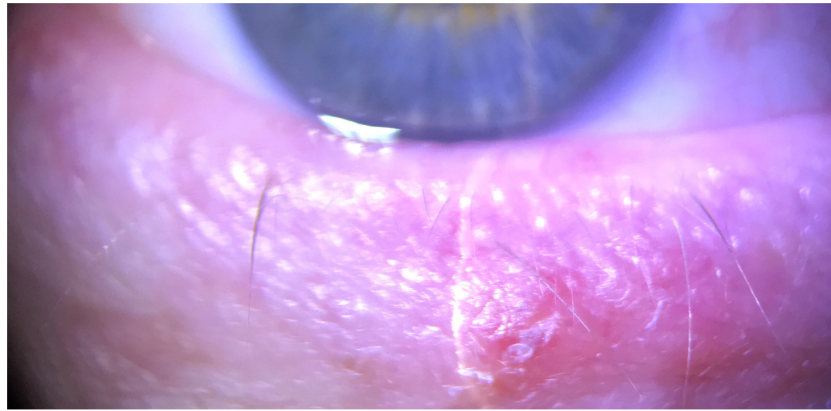
Liang L, Ding X, Tseng SC. High prevalence of demodex brevis infestation in chalazia. Am J Ophthalmol. 2014 Feb;157(2):342-348.e1. doi: 10.1016/j.ajo.2013.09.031. Epub 2013 Oct 2. PMID: 24332377.

Schear MJ, Milman T, Steiner T, Shih C, Udell IJ, Steiner A. The Association of Demodex with Chalazia: A Histopathologic Study of the Eyelid. Ophthalmic Plast Reconstr Surg. 2016 Jul-Aug;32(4):275-8. doi: 10.1097/IOP.0000000000000500. PMID: 26108058.

CHALAZIA TREATMENT-INCISION FREE, INJECTION FREE, SCAR FREE MANAGEMENT-PIONEERED BY DR. LAURA PERIMAN



CHALAZIA MANAGEMENT



Settings: Periman Protocol with extra pulses on the lesion. Used small light guide with Toyos settings x 2 and then 560nm 3.0ms 25ms 18 J/cm²



Selina R. McGee, OD



CHALAZIA TREATMENT-INCISION FREE, INJECTION FREE, SCAR FREE MANAGEMENT-



1 TX WITH IPL-NEXT DAY



INTRALESIONAL STEROID INJECTION

Indications

- Failure of conservative treatment
- Located in medial aspect of lid (won't be able to do incision & curettage)
- Patient and/or surgeon choice

Contraindications

- Allergy/sensitivity to steroid
- Darkly pigmented skin?

INTRALESIONAL STEROID INJECTION

Injection of triamcinolone acetonide (Kenalog) directly into the chalazion

Success rate 75-90%

May require two injections (~25%)

- Generally separated by 2-6 weeks

INTRALESIONAL STEROID INJECTION

Risks and Complications

- Depigmentation
- Infection
- Bleeding
- Bruising
- Allergic reaction to medicine
- No resolution of lesion (2 injections?)
- Recurrence
 - Alters histology
- Local fat atrophy
- Vision loss

Intralesional Steroid Injection

Alcohol swab on cap

Air in syringe

Inject air into vial

Draw kenalog into syringe

Alcohol cap again

Multiple dose vial

10-40 mg/ml

- May dilute 40



INTRALESIONAL STEROID INJECTION

Topical anesthetic

Evert the lid???

often don't

Clamp???

often don't

25 or 27 gauge needle

Make sure you're not in a blood vessel

Inject at an angle, not perpendicular to the lid

- Stabilize hand on patient's head

Inject 0.2-0.4cc of 10, 20, or 40 mg/ml



INTRALESIONAL STEROID INJECTION

Pressure with gauze for 2-3 minutes if bloody tears

Antibiotic drop in-office

Rx antibiotic?

Resume warm compresses BID in 2-3 days

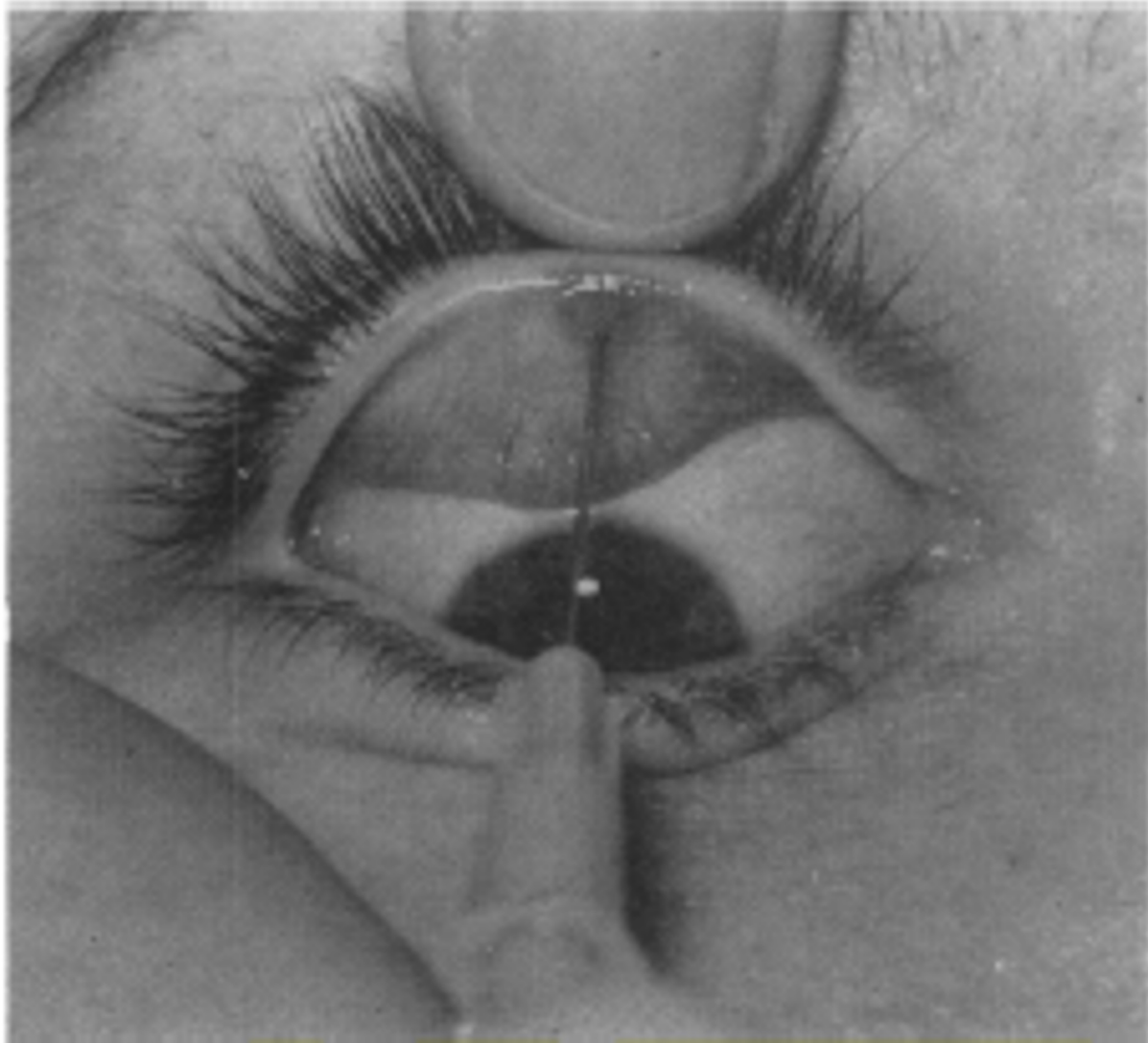
RTC 2-4 weeks



Goawalla et. al 2007

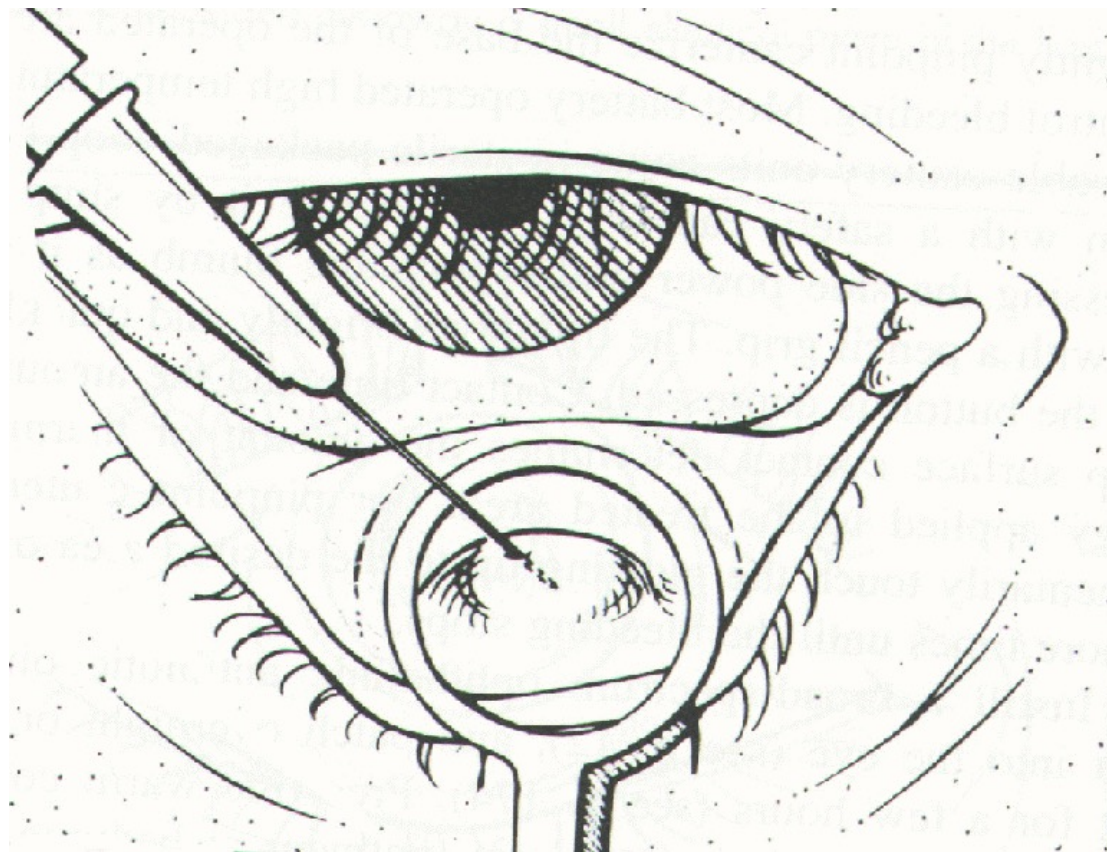


Ben Simon et. al 2005

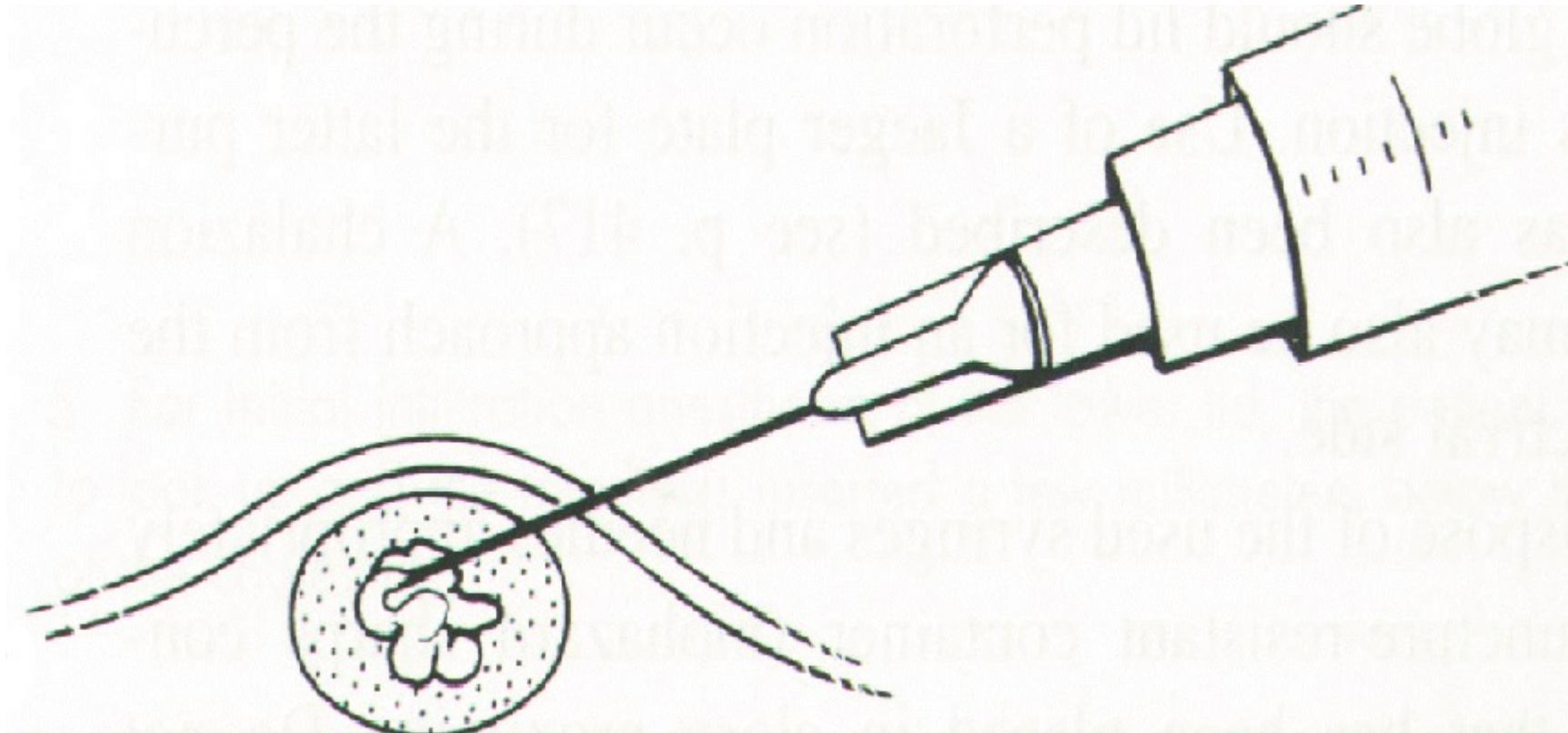


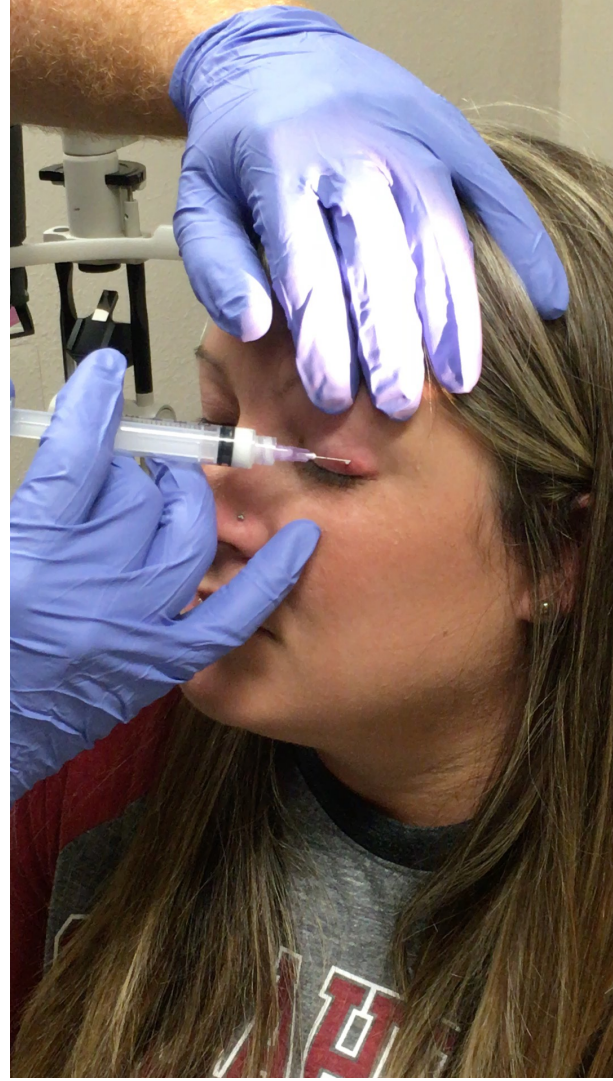
Watson 1984

INTRALESIONAL STEROID INJECTION TECHNIQUE



INTRALESIONAL STEROID INJECTION TECHNIQUE-ASPIRATE!





CHALAZION INCISION AND CURETTAGE

Surgically incise and drain chalazion

Often attempted after conservative measures

Effective when medical treatment/ steroid injection are not



CHALAZION INCISION AND CURETTAGE

Indications

- Particularly large chalazions (>6mm)
- Chronic chalazions (>3-6 months)
- Failure of injection to resolve lesion
- Patient and/or surgeon choice

Contraindications

- Allergy/Sensitivity to anesthetic
- Unable to hold still
- Medial aspect, near punctum

INCISION AND CURETTAGE

Risks and Complications

- Incomplete removal
- Infection
- Allergy to anesthetic
- Recurrence
- Scarring
- Lid notching
- Permanent gland damage

INCISION AND CURETTAGE

Topical anesthetic OU

Betadine for 3 minutes or alcohol swab

Dot the external surface

Inject 0.3-0.5 cc 1% lidocaine/epinephrine 1:200,000 *adjacent* to chalazion

- Digital massage to spread anesthesia.

Clamp (smallest possible)

- Tight enough to prevent slippage
- Ask about discomfort



INCISION AND CURETTAGE

Vertical incision

- Cut away from the globe
- Stop 2-3 mm from lid margin
- Feather blade vs Ellman (no tactile feedback)

Remove capsular contents with curette

May excise fibrotic capsule with forceps and scissors

- Cut "X" and snip corners

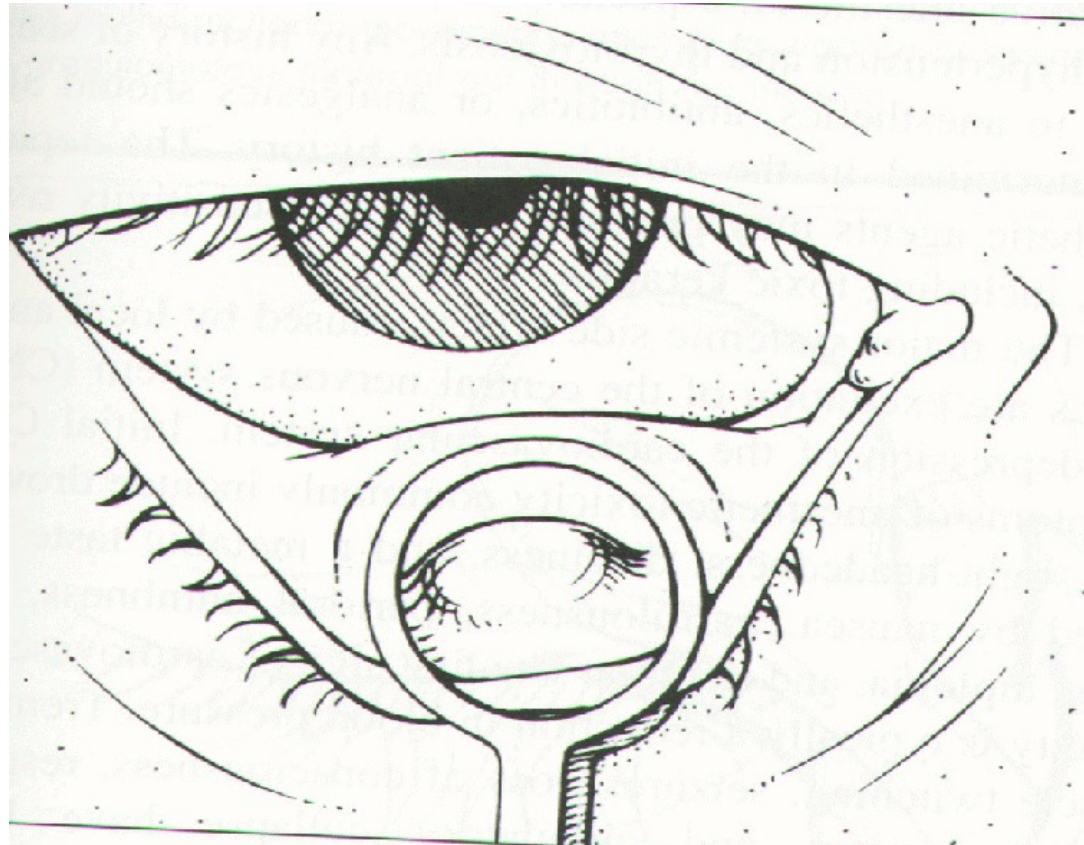
+/- intralesional steroid

Pressure for 3 minutes to achieve hemostasis

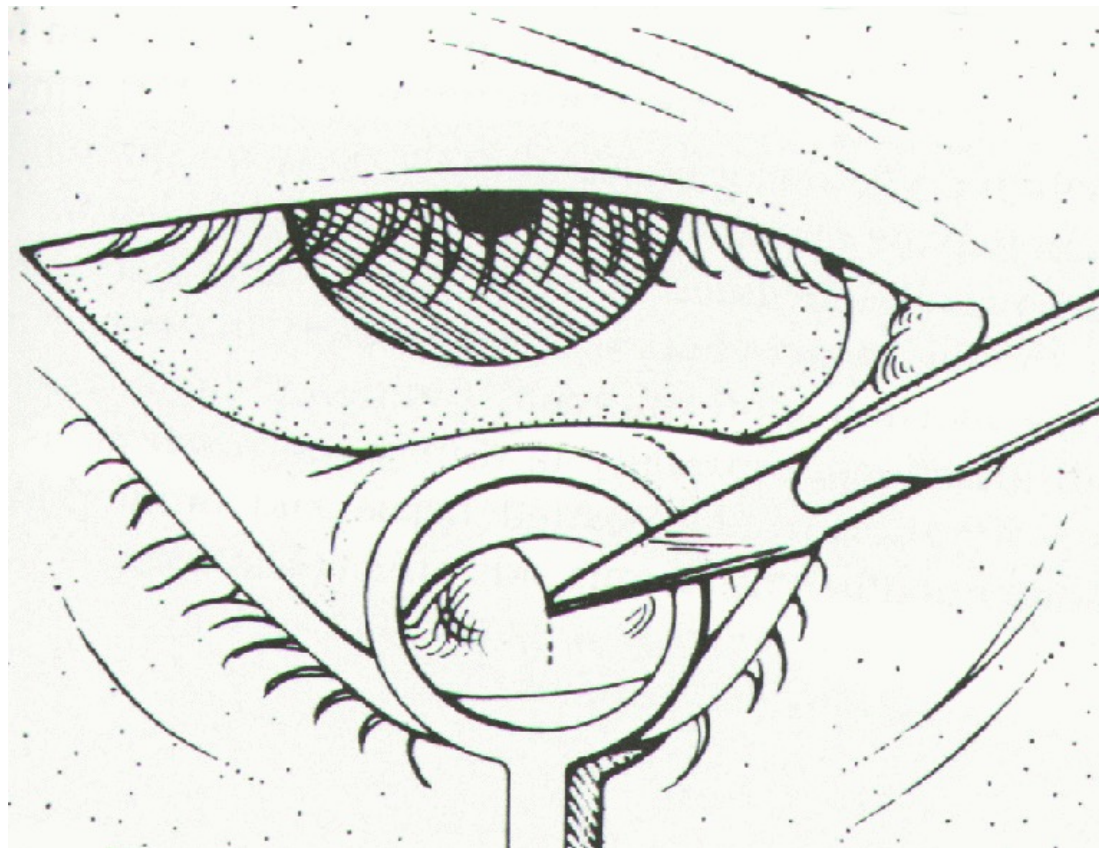
Palpate to make sure you got it all

Saline rinse and erythromycin on CTA

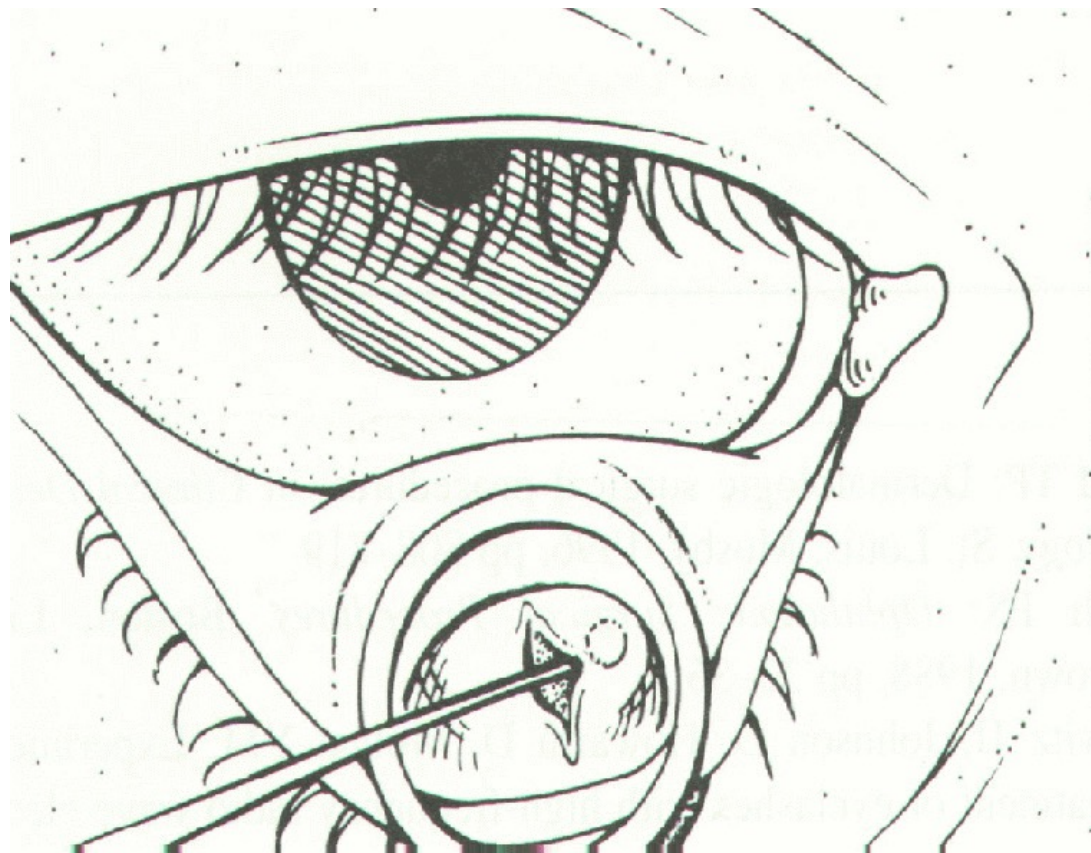
CHALAZION INCISION AND CURETTAGE



CHALAZION INCISION AND CURETTAGE



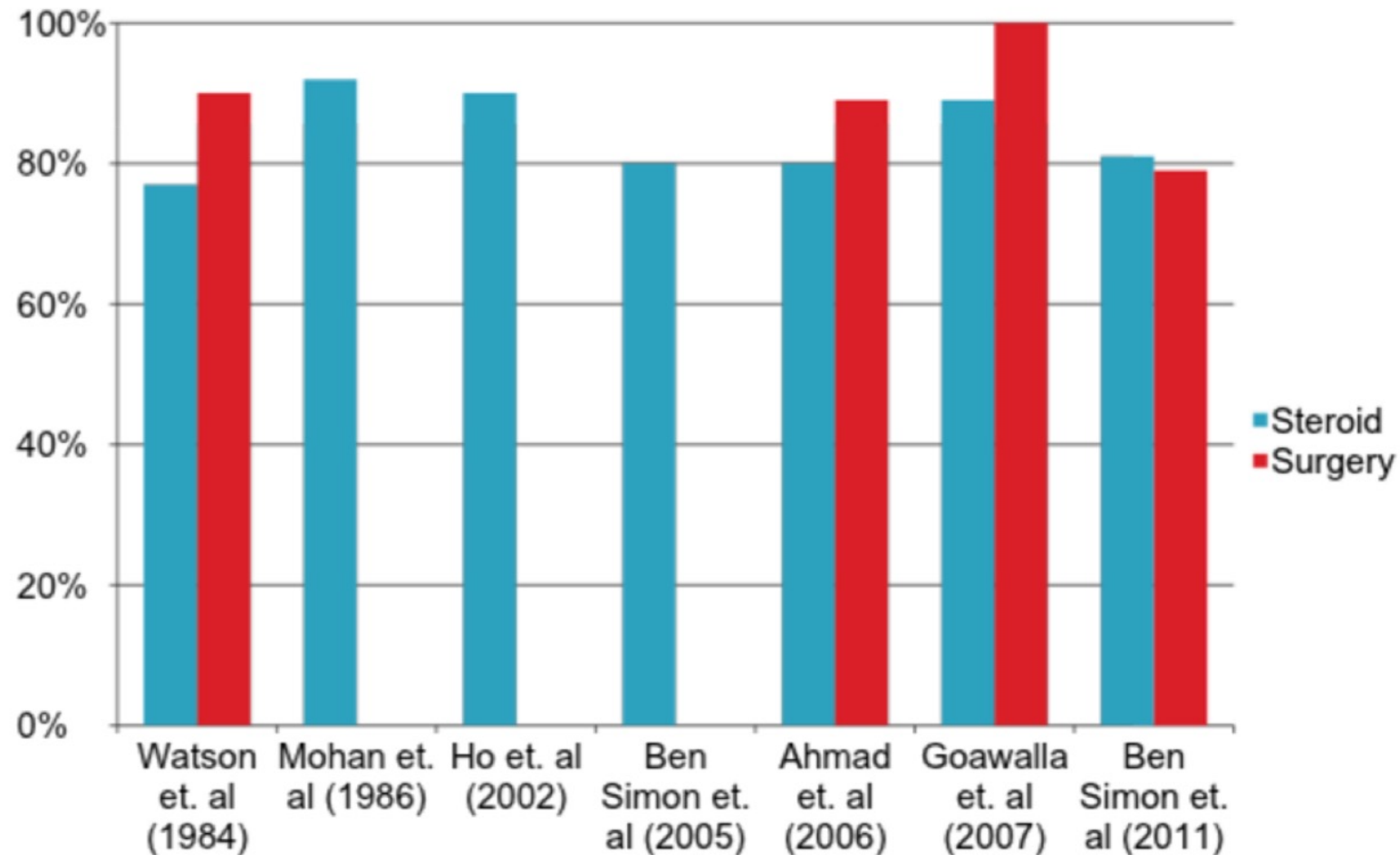
CHALAZION INCISION AND CURETTAGE



CHALAZION INCISION AND CURETTAGE

Postop instructions:

- Antibiotic ointment and/or steroid ung x 4-7 days
 - Erythromycin or Tobradex ung BID-TID
- No warm compresses for 2 days
- Pressure dressing?
- RTC 1-4 weeks



- Goawalla: prospective randomized clinical trial. Some had 2 injections or 2 surgeries (that's how they got to 100%). First round was 84% and 87%. Subjective pain scores better in steroid vs surgery. Overall satisfaction scores equal between steroid and surgery.
- Ben Simon 2011 was prospective rct. All pts had failed conservative tx.
- If someone comments on <100% resolution for i&c: it's not an easy procedure. Can be frustrating if no cheesy material. Then you have to excise capsule. Difficulty is reflected in these %s. most of these surgeries were done by general omd. failed surgeries went to plastics

EQUIPMENT LIST

Incision & Curettage

- 1-3cc syringe
- 27 gauge or 30 gauge needle (0.5 inch length)
- Chalazion clamp
- Feather blade scalpel or Ellman unit
- Curette
- 1% Lidocaine with/without epinephrine 1:200,000
- 4% topical lidocaine
- Jaeger plate (optional)
- Sterile gauze 4"x4"
- Cotton tipped applicators
- Erythromycin ung
- Betadine swabs or alcohol pads



VERRUCA



EXCISION WITH RADIOFREQUENCY

Advantages of Radiosurgery

- Quick and easy (to do and to learn)
- Nearly bloodless field
- Minimal Post-op pain
- Rapid healing
- Fine control with variety of tips
- No muscle contractions or nerve stimulation from radiowaves (Farraday effects)

#1 RECOMMENDATION

A Radiofrequency Surgical Device

- RF surface ablation
- Incisions
- Excisions
- Hemostasis/cautery
- RF Epilation
- RF punctal occlusion
- Telangiectasias



CRYOSURGERY | PROS

Well tolerated

Minimally invasive

Low cost

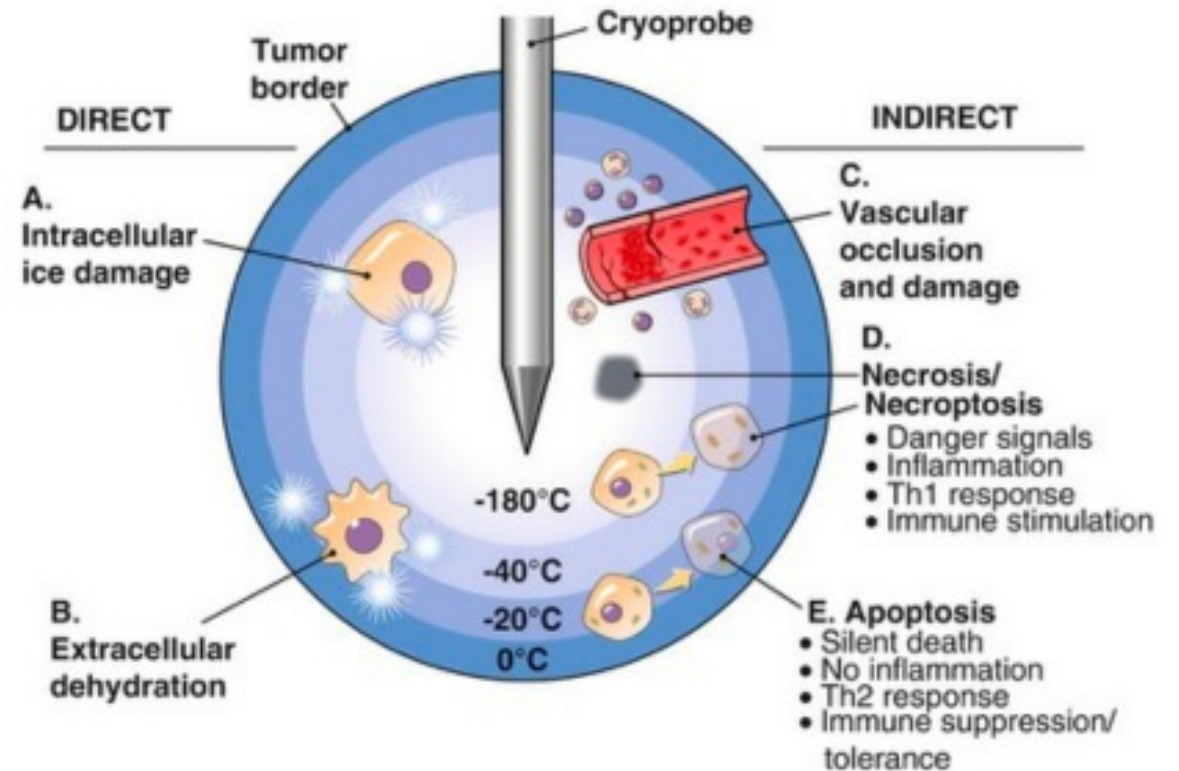
Good cosmesis



CRYOSURGERY | MECHANISMS OF CELL DEATH

Cryosurgery induces cell death by direct and indirect mechanisms including:

- Necrosis
- Necroptosis
- Apoptosis
- Vascular damage
- Cryogen = liquid nitrogen (-320°F)



CRYO



ELLMAN UNIT VACUUM



ELECTRODE SIZE

Assortment of sizes, shapes and lengths

Depends on tissue to be incised

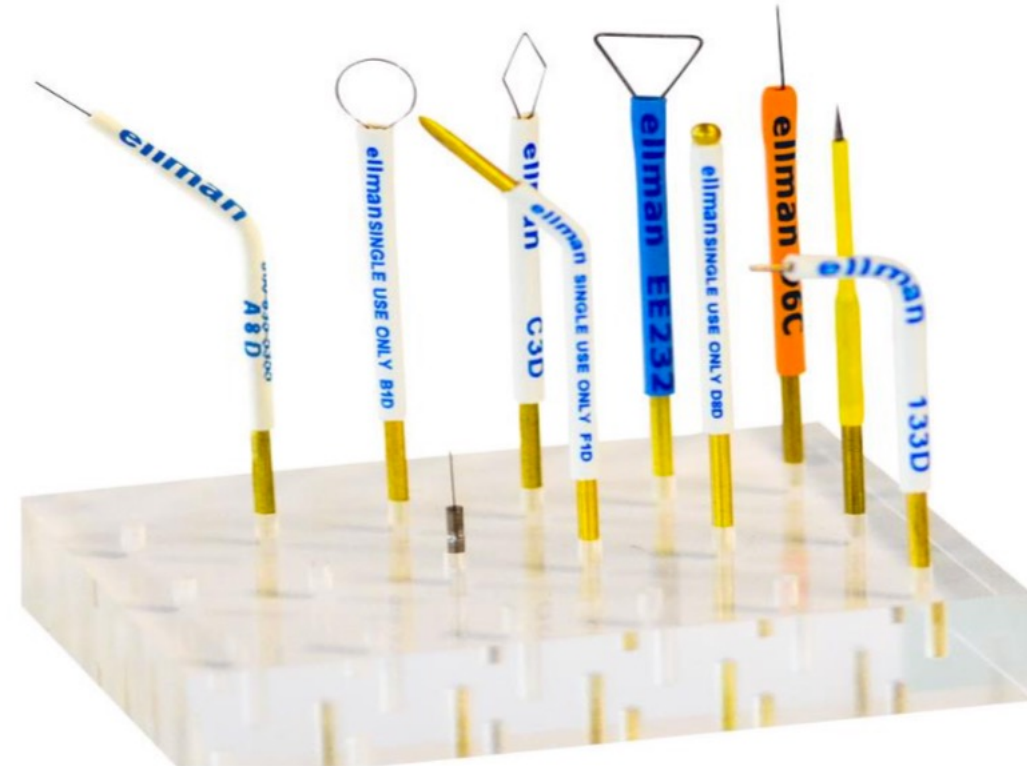
Size proportional to power required

Smaller electrode

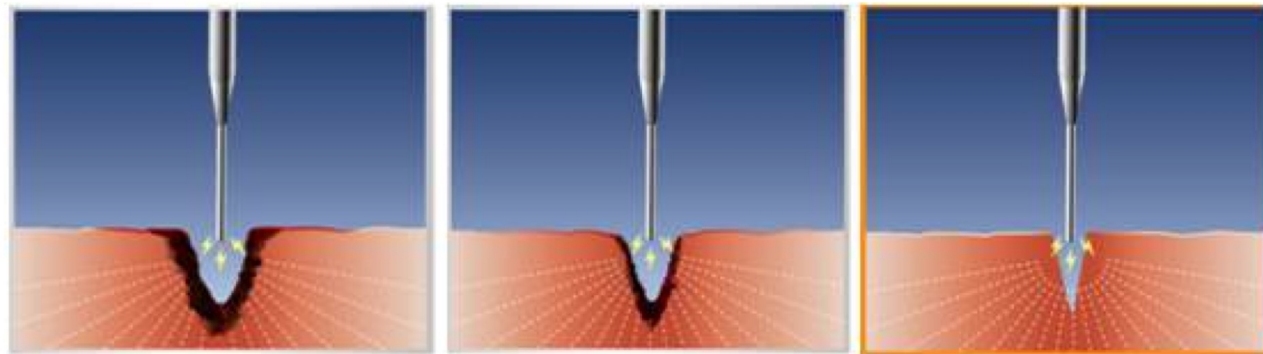
- Higher current concentration
- Lower Power
- Decreased lateral heat

Larger electrode, loop or triangular

- More power
- More scar tissue
- More lateral heat



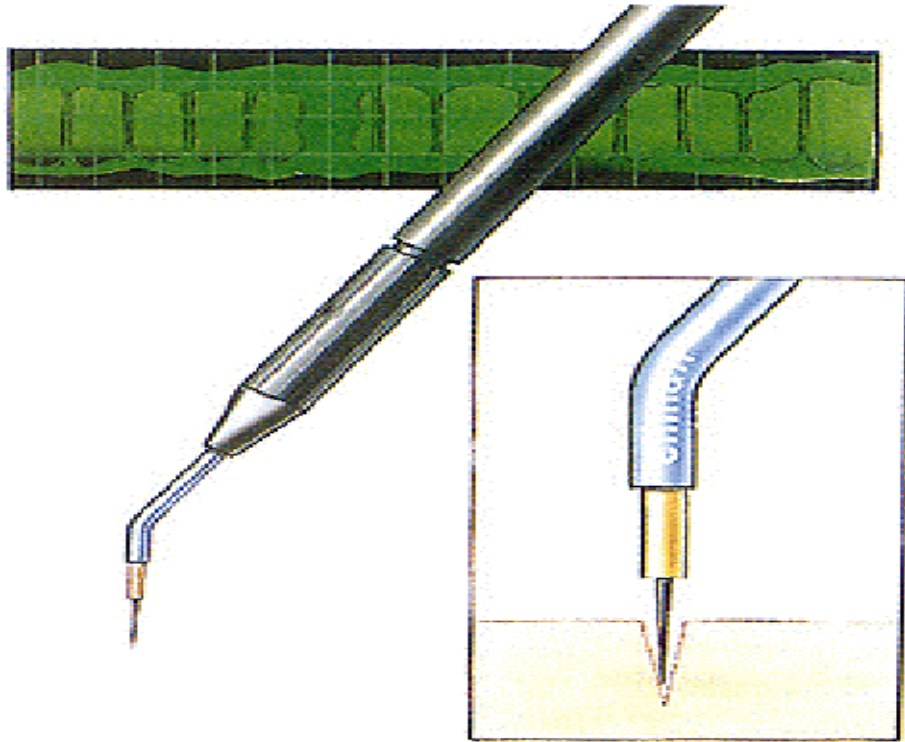
Benefits of High Frequency Radiosurgery



Low Frequency/High
Temperature/More
Lateral Heat
(Electrosurgery)

High Frequency/Low
Temperature/Less
Lateral Heat
(Radiosurgery)

SETTING 1 FILTERED FULLY RECTIFIED WAVE FORM — PURE CUTTING ACTION



90% Cutting

10% Coagulation

Cutting current: high frequency sine wave that is not dampened.

Produces very focused heat buildup that ruptures tissue through either molecular activity or through production of steam microbubbles

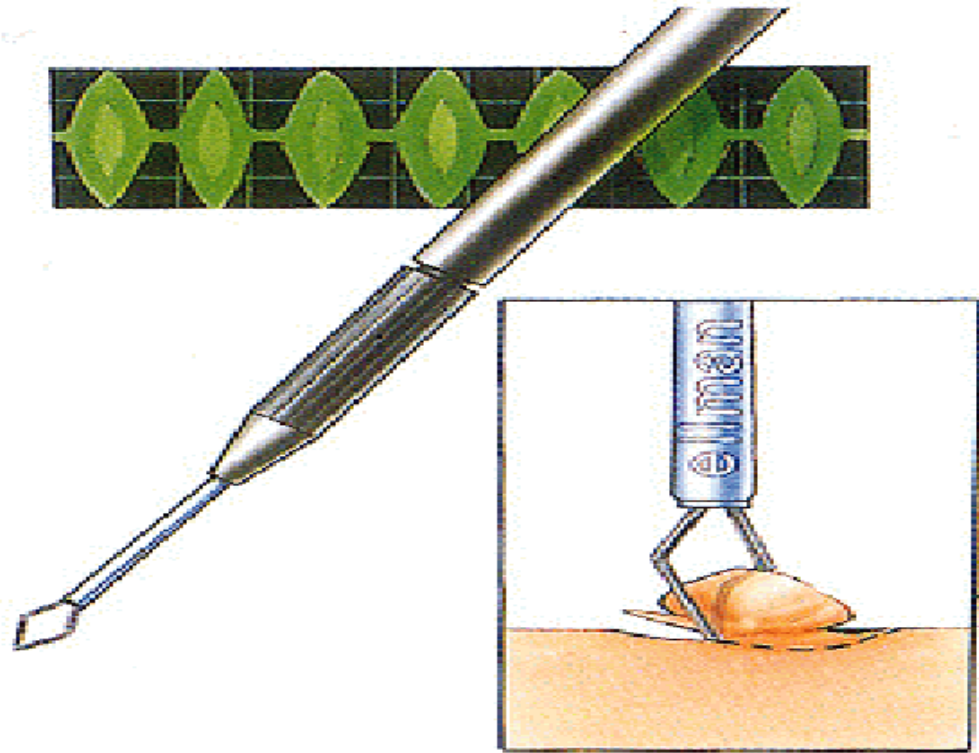
Minimal lateral heat

Use for biopsy, incisions, chalazion

Fully filtered and fully rectified

Power \approx 3.0 (old unit) or 20 (newer unit)

SETTING 2 RECTIFIED WAVEFORM (BLENDED) CUT AND COAG



50% Cutting

50% Coagulation

When don't need biopsy

Helps greatly with bleeding during procedure

Very useful in vascular regions

Great for excising

- Skin tags, verruca

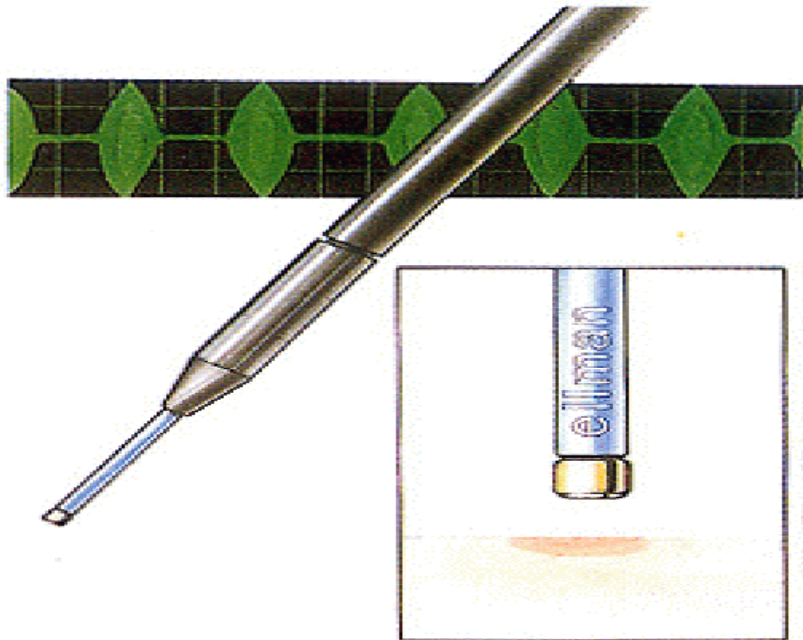
Fully rectified



Waveform we use the most

Power \approx 3.0 (old unit) or 20 (newer unit)

SETTING 3 PARTIALLY RECTIFIED WAVEFORM COAGULATION/HEMOSTASIS



Partially rectified



Power \approx 2.5 (old unit) or 20 (newer unit)

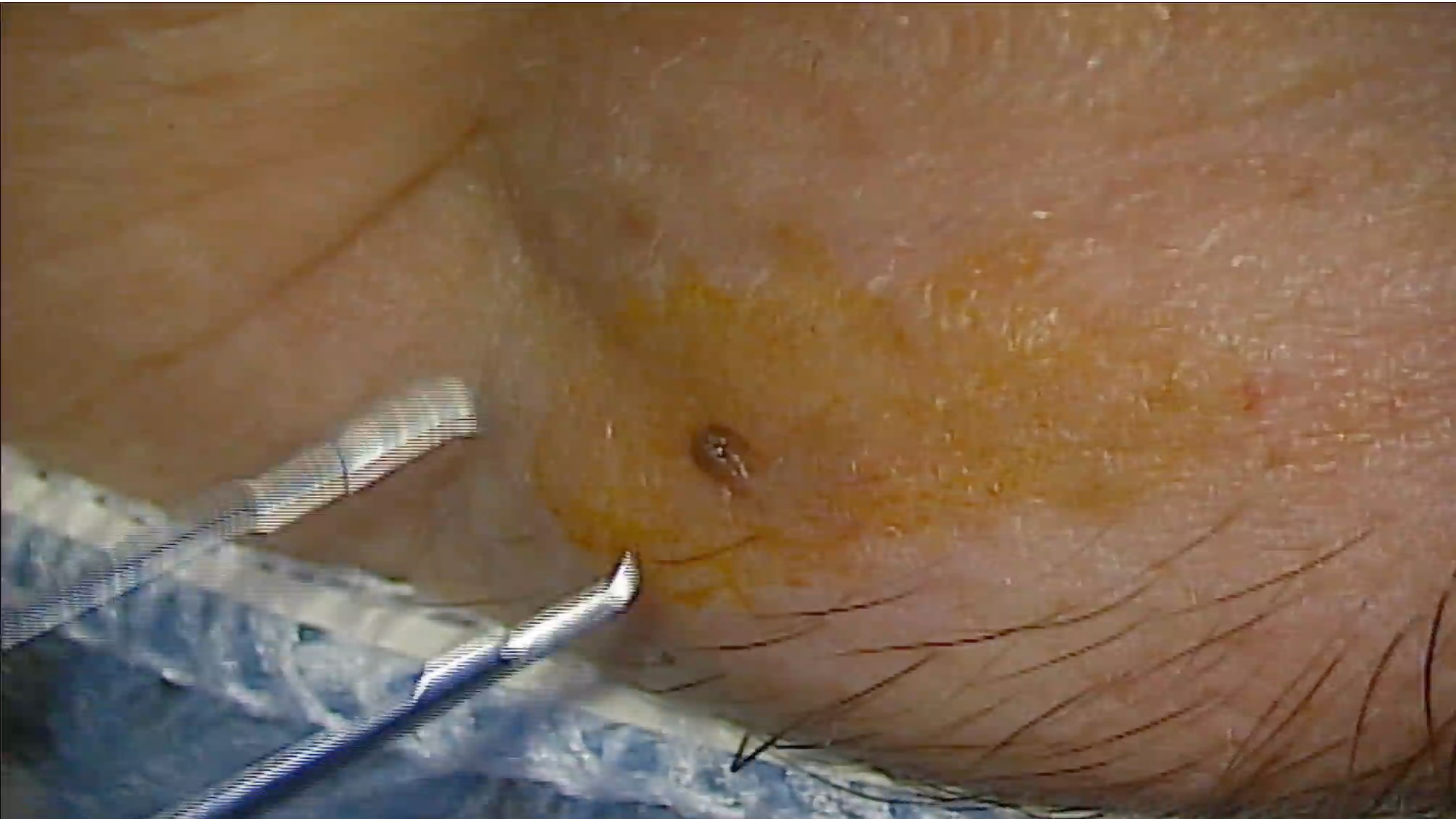
90% Coagulation

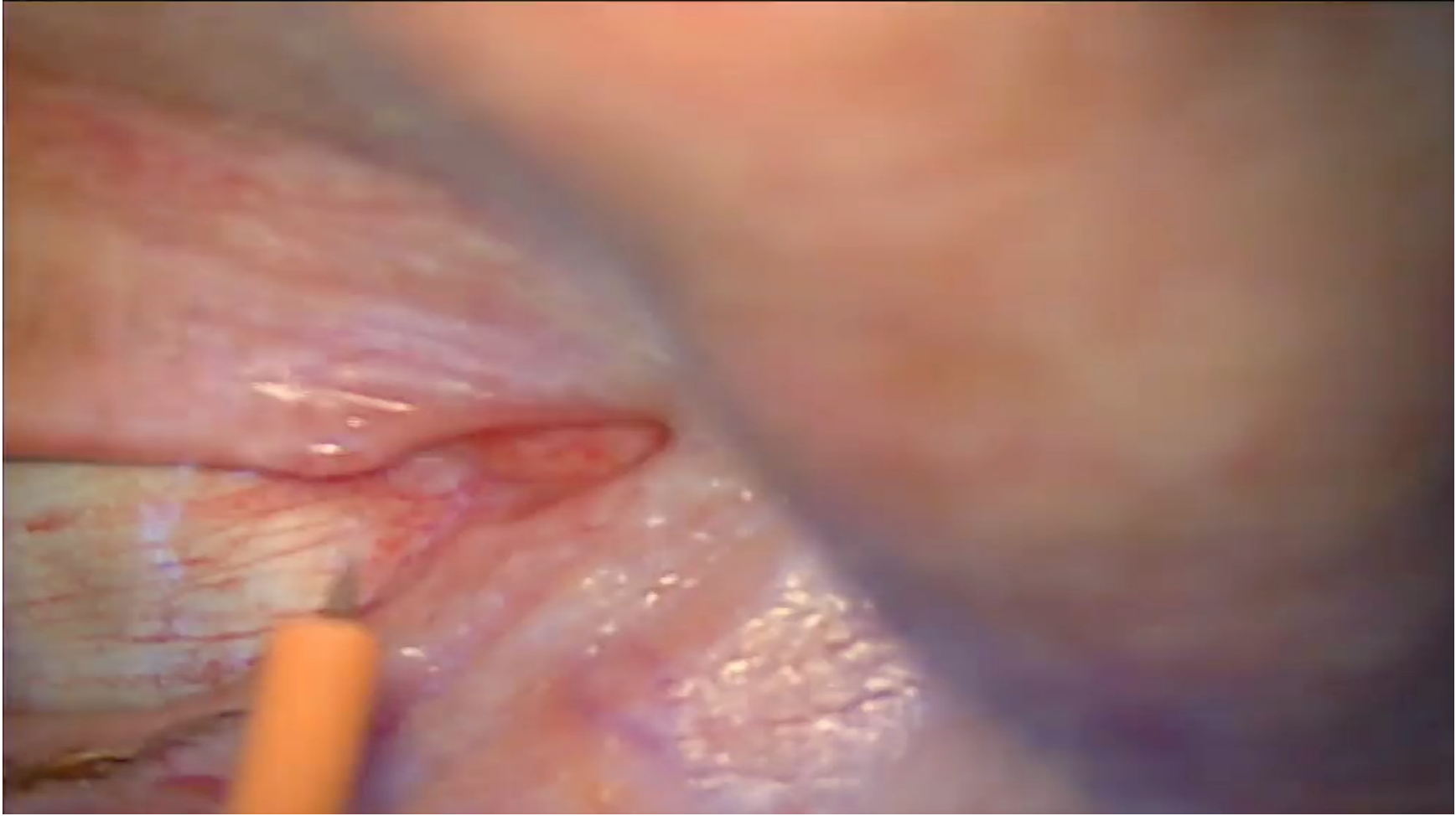
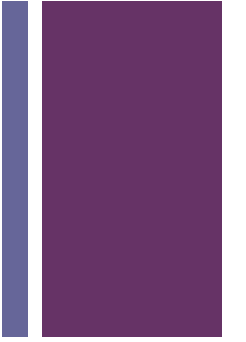
10% Cutting

Coagulating current: high frequency but dampened (rectified) sine wave.

Produces oscillation of molecules leading to generation of intracellular heat that ultimately causes tissue dehydration/coagulation (hemostasis)

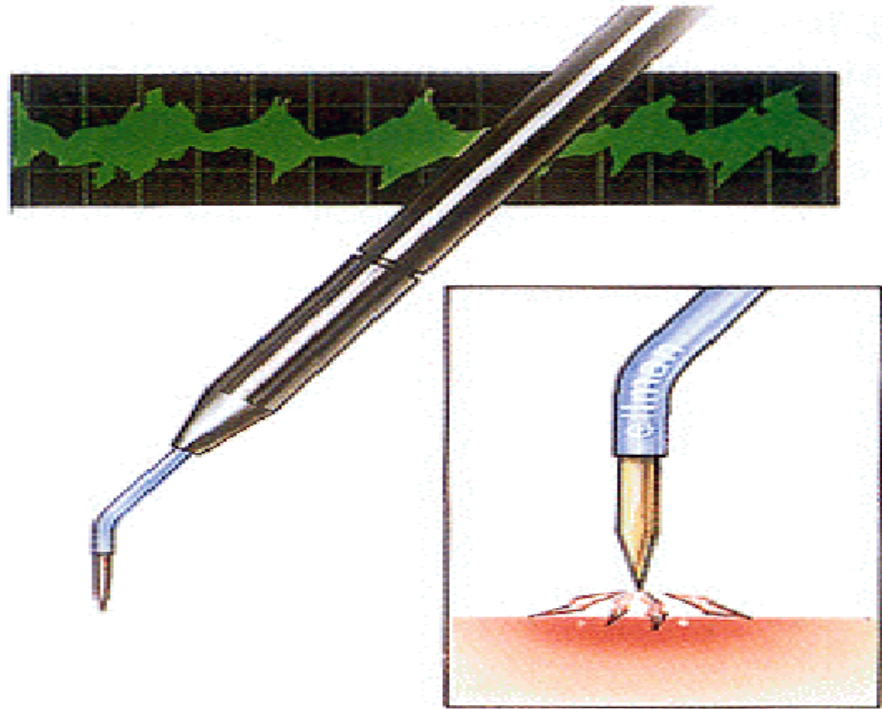
Epilation, punctal occlusion





SETTING 4

FULGURATION – COAGULATION AND DESTRUCTION



Markedly damped



Power \approx 8 (old unit) or 80 (newer unit)

Spark gap fulgurating current (hyfrecaction) for superficial cautery

Doesn't penetrate deeply – superficial treatment

Electrodessication (papilloma bed)

Destruction of cyst remnants

Intentional destruction of diseased tissue

- BCC
- SCC

TRICHIASIS PROCEDURE TECHNIQUE

Cut offending lashes

Anesthetize???

Grab lash with forcep

Use microinsulated needle

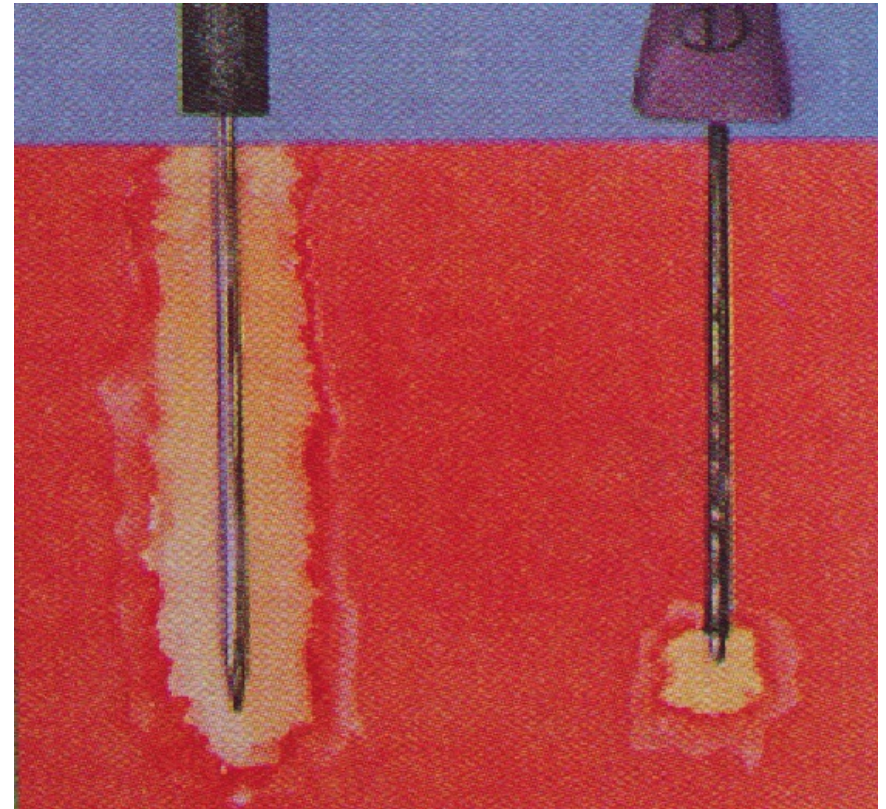
Put needle beside lash shaft into follicle
until cannot go further

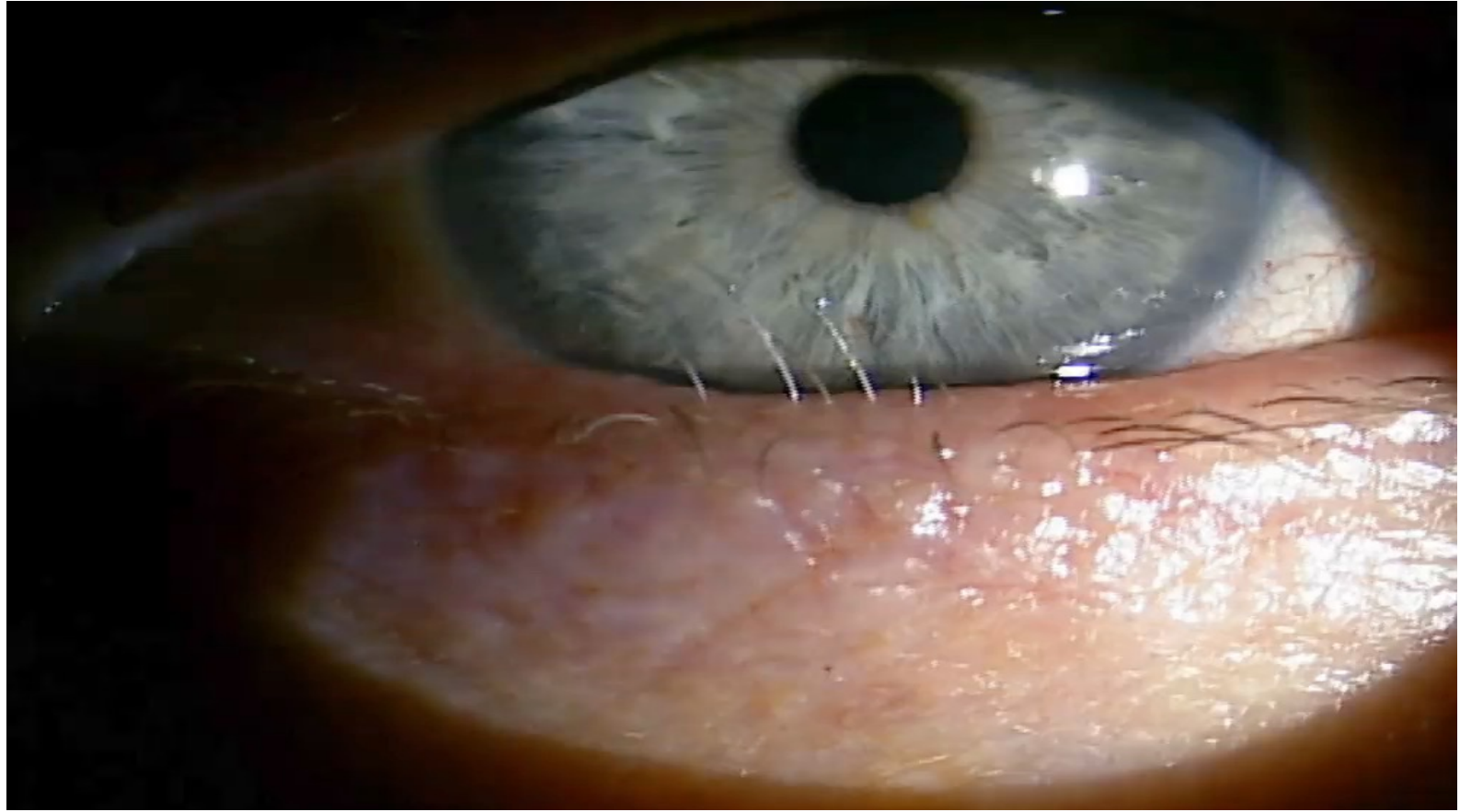
Lowest power setting, Coag

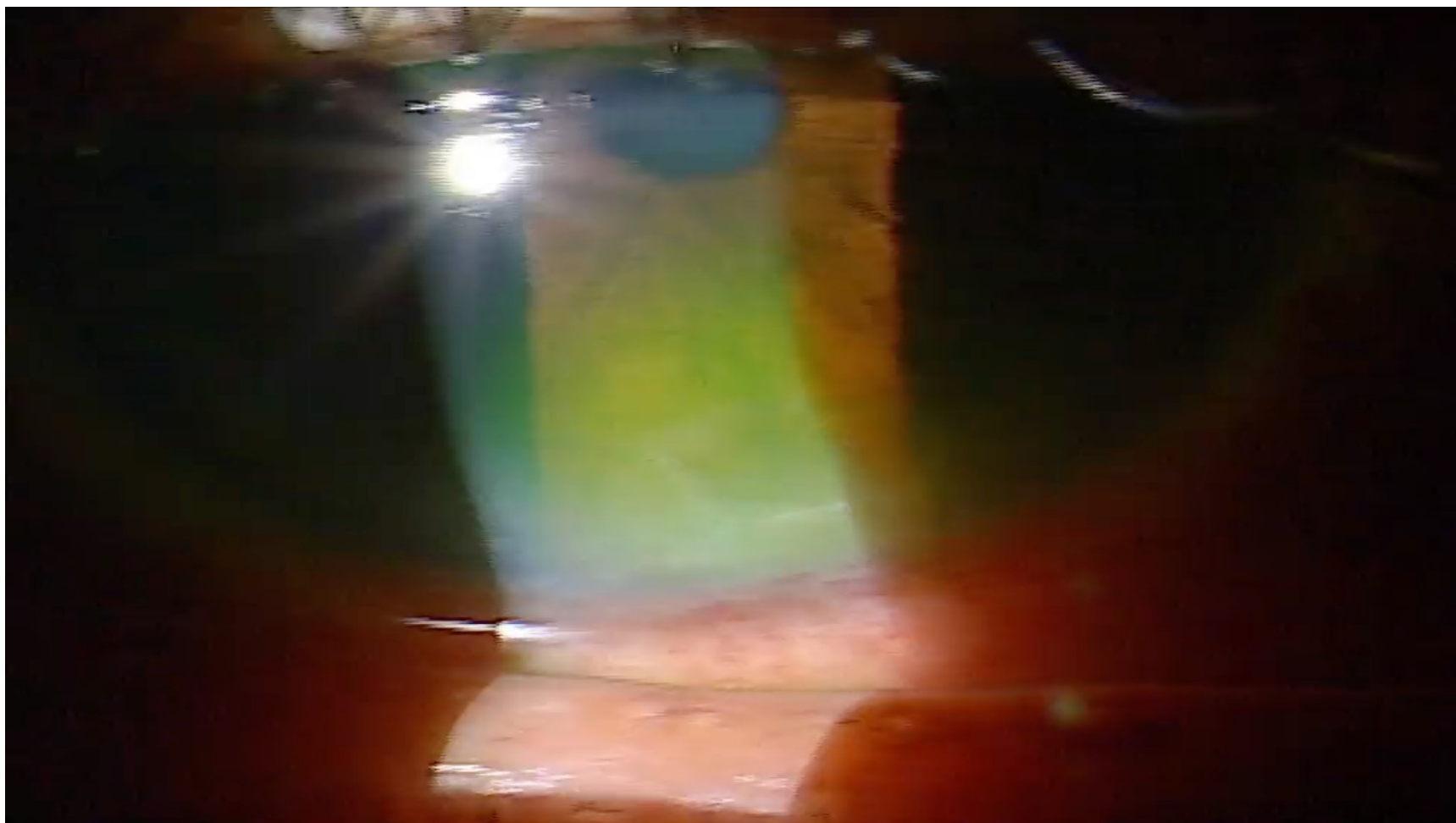
Touch and let off immediately of footplate

Gently tug lash – if comes out smooth are
done

If not treat quickly again Power \approx 0.1-0.2 (old unit) or 1-2 (newer unit)







LATERAL HEAT



Lateral heat = $\frac{\text{time} \times \text{waveform} \times \text{power} \times \text{electrode size}}{\text{frequency}}$

Factors Affecting Lateral Heat

Electrode contact time: slow passage = increased heat

Excessive power can lead to sparking (too little power leads to tissue drag)

Larger electrode head sizes lead to greater power/heat generation

Different waveforms are associated with different levels of heat:

- Fulguration > COAG > CUT/COAG > CUT

Higher frequency associated with less lateral heat

RADIOFREQUENCY (RF) SURGERY INDICATIONS

Skin papillomas/skin tags

Seborrheic keratoses

Verruca

Sebaceous cysts

Benign Nevi

Pyogenic Granulomas

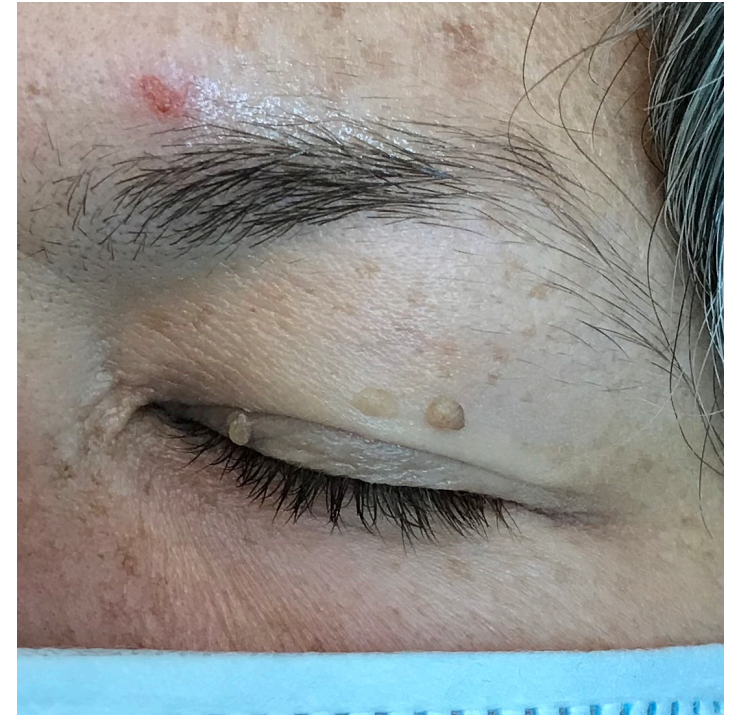
Incision into chalazion

Trichiasis

Xanthelasma

Blepharoplasty incisions

Biopsies of suspicious lesions
(BCC, SCC, melanoma)



PROCEDURE TECHNIQUE

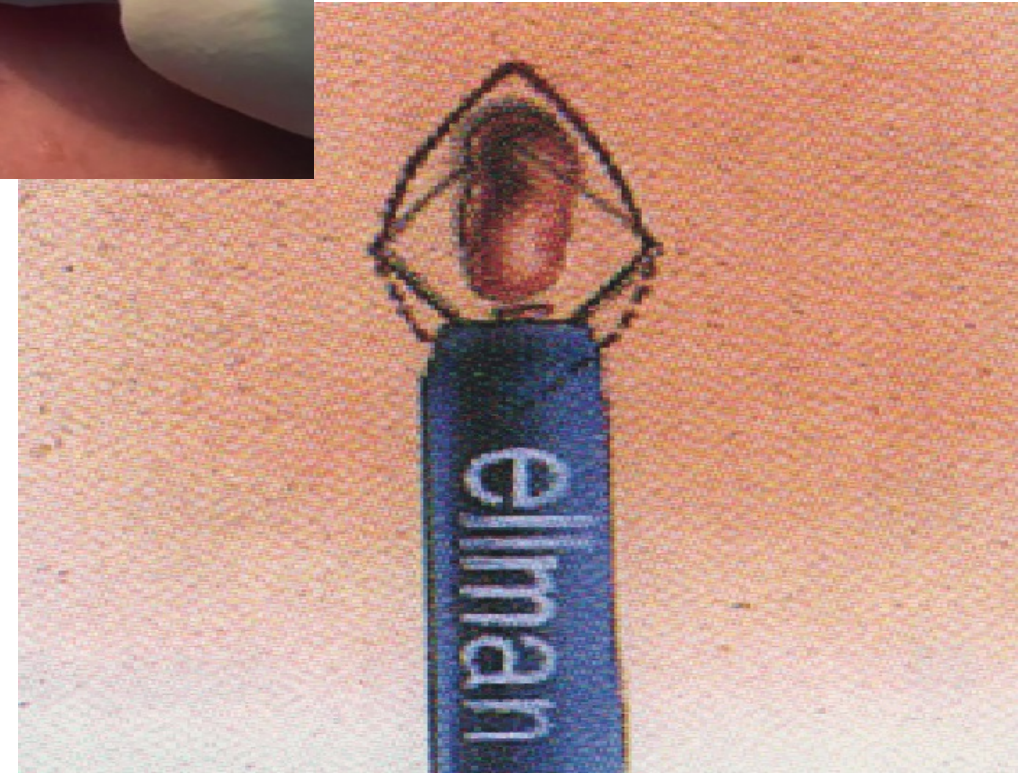
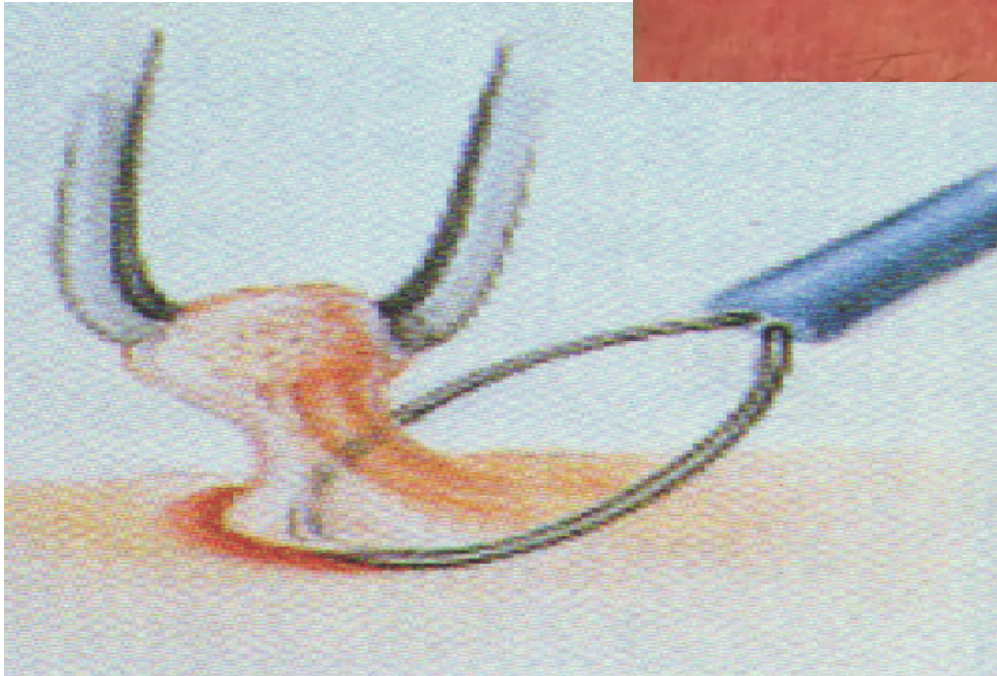
Have assistant turn on/position vacuum unit – USE vacuum and masks!

- Have isolated HPV and HIV in smoke

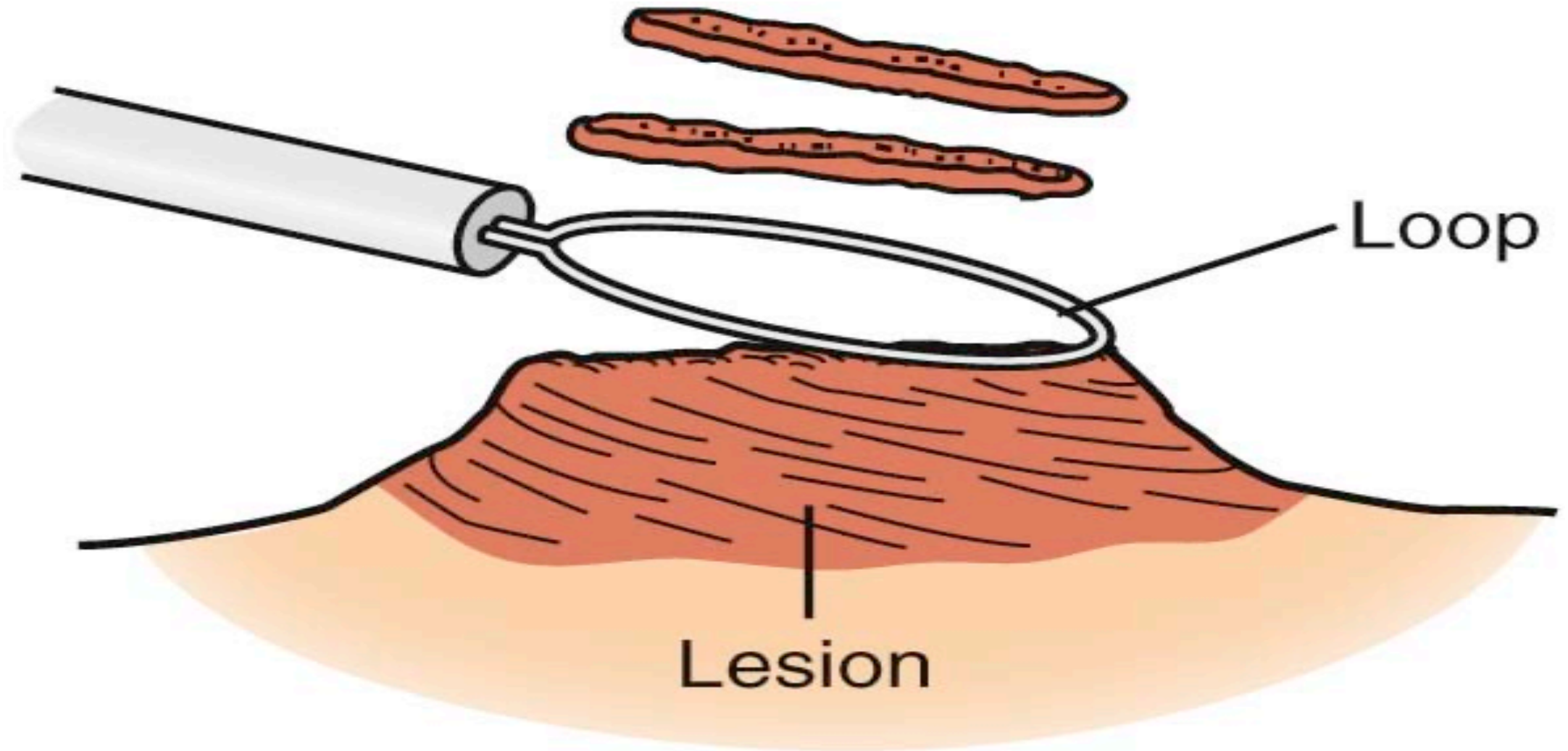
Place yourself in comfortable/stable position to do procedure

Brace your handpiece wrist on patient for stability

EXCISION TECHNIQUES



FEATHERING TECHNIQUE



PROCEDURE TECHNIQUE

Electrode tip should be applied perpendicularly to allow even distribution of energy

Press footplate activator when ready to begin procedure

Move in expeditious but controlled fashion: always keep electrode moving when contacting tissue




An alcohol wipe is used to clean the skin

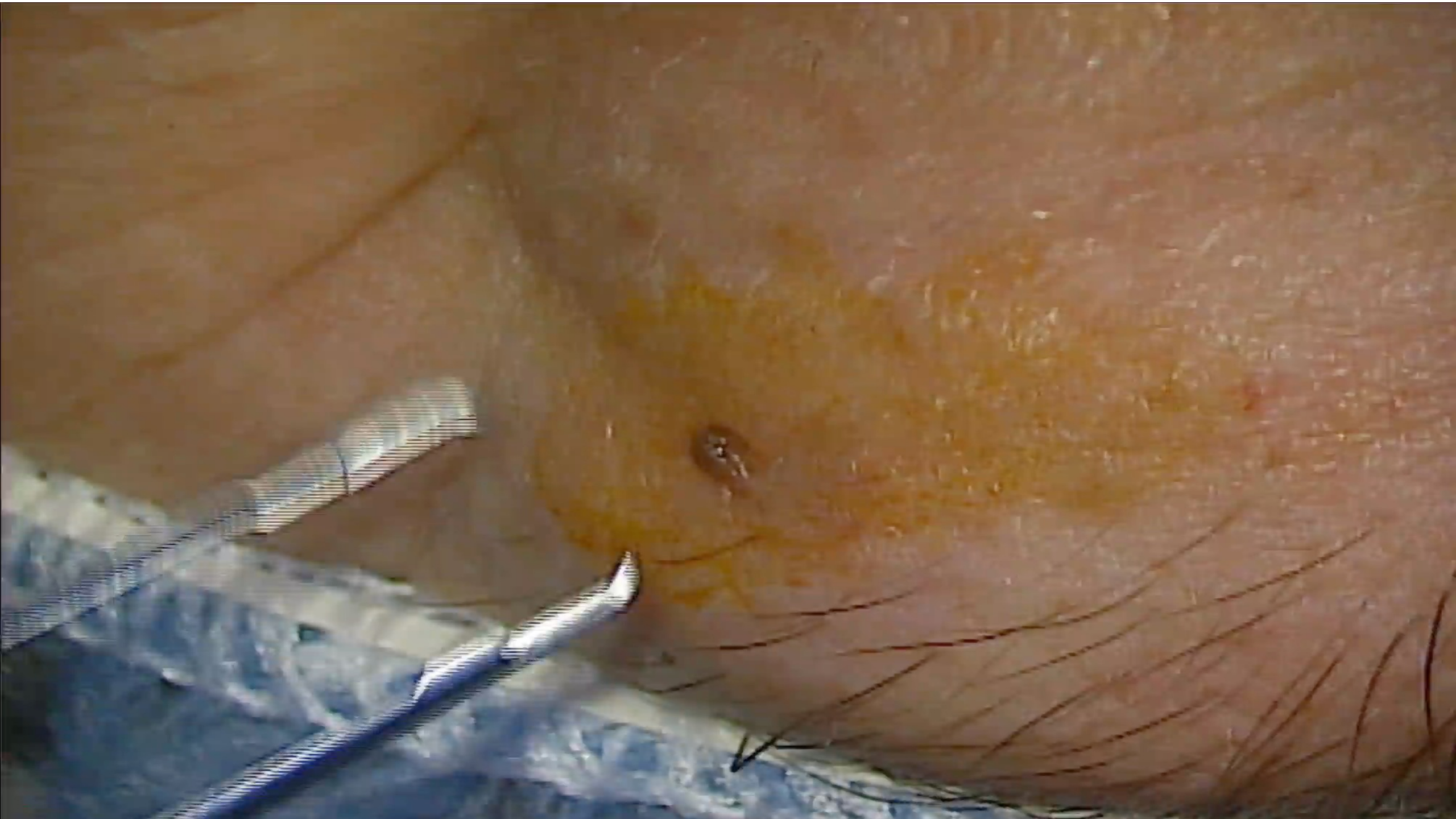
To Reorder
800-222-2020
FAX 800-328-9133
Call No. 570-0800009-20

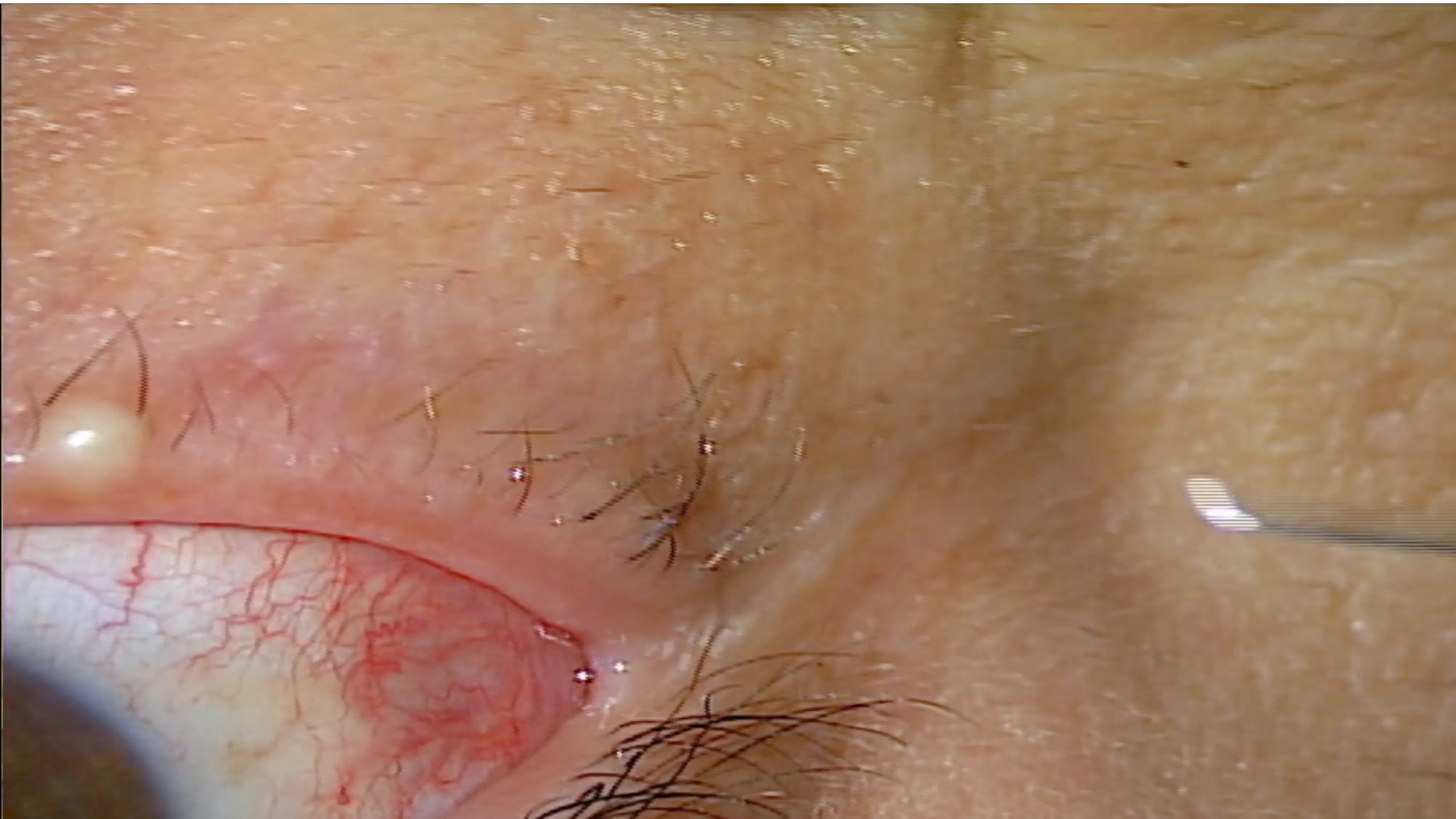
NON STERILE
Lot No 2008-1

AIR

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CCH RF TREATMENT (TECHNIQUE LEARNED FROM DR. EDWARD JACCOMA)

Topical anesthetic, then 0.2cc Local lidocaine injection, Pt in upgaze @ SL

Settings: Power 4 in Cut mode

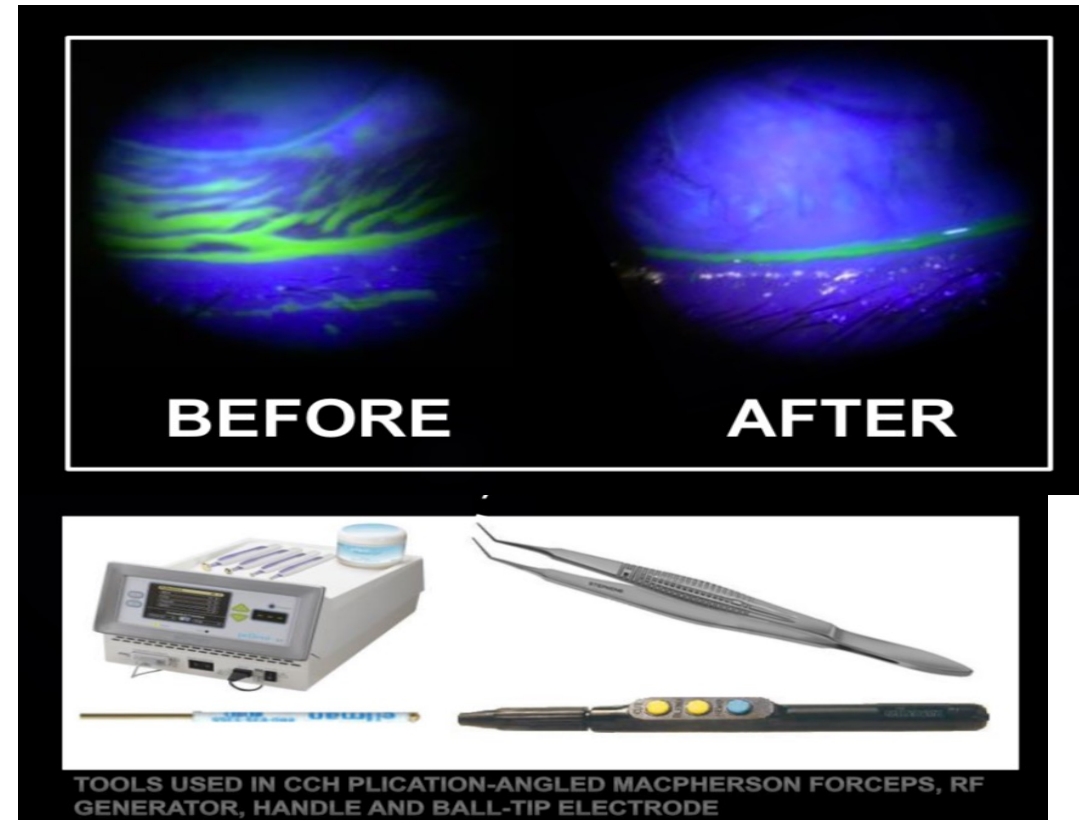
Use the forceps to grasp redundant tissue

Ball tip applies energy to CCH fornix folds

Total treatment time/eye approx. 3-5 min

Tapered course of Tobramycin/Dex drops

Treat fellow eye 4-6 wks later



ASEPSIS

aseptic technique
sterile equipment
scrub hands
sterile gloves



ASEPSIS





BLOODBORNE PATHOGENS

Universal Precautions:

Do not recap contaminated needles

Needle stick safety

Needle stick policy

You will have to be aware of these things if doing procedures in your office



INFORMED CONSENT

Indications for treatment

Description of treatment in layman's terms

Alternatives to treatment

Risks and benefit of treatment

Expected and unexpected outcomes

Patient must request procedure

PRE-OPERATIVE ACTIVITIES

check patient allergies

check vital signs (pulse, respiration, BP)

informed consent

handling patient fear

set up equipment

Inspection of equipment

Inspection of medication - discard if cloudy, expired, or container damaged

Photodocument lesion

PROCEDURE TECHNIQUE

Pre-op (photos, consent, BP and Pulse, VA)

Anesthetize (infiltrative usually)

Clean area, drape if needed

- Betadine needs 3 mins on skin!

Turn on Ellman unit: warm up for at least 30 seconds

Choose appropriate waveform

Choose initial power setting (will often need to adjust depending on tissue response to energy level chosen)

PROCEDURE TECHNIQUE

Have assistant turn on/position vacuum unit – USE vacuum and masks!

- Have isolated HPV and HIV in smoke

Place yourself in comfortable/stable position to do procedure

Brace your handpiece wrist on patient for stability

PROCEDURE TECHNIQUE

Electrode tip should be applied perpendicularly to allow even distribution of energy

Press footplate activator when ready to begin procedure

Move in expeditious but controlled fashion: always keep electrode moving when contacting tissue

PROCEDURE TECHNIQUE

Keep surgical site moist (saline gauze) to avoid tissue drag; also wipe energized tip to remove tissue stuck to it

For removing mass lesions, use loop electrode/grab with opposite hand forceps/have specimen jar ready for lab submission

When feathering down a lesion with a loop, keep perpendicular--- remove until healthy tissue seen (particularly helpful with lesions on gray line)

Can use forceps closed tips to touch end of area of bleeding, touch electrode to forceps to transfer energy to area to stop bleeding

PROCEDURE TECHNIQUE

Keep the tissue around the lesion taut

Keep surgical site moist (saline gauze) to avoid tissue drag

- Removes debris on surgical field

Also wipe energized tip to remove tissue stuck to it

When feathering down a lesion with a loop, keep perpendicular---remove until healthy tissue seen

Can use forceps closed tips to touch end of area of bleeding, touch electrode to forceps to transfer energy to area to stop bleeding

POST PROCEDURE TECHNIQUE

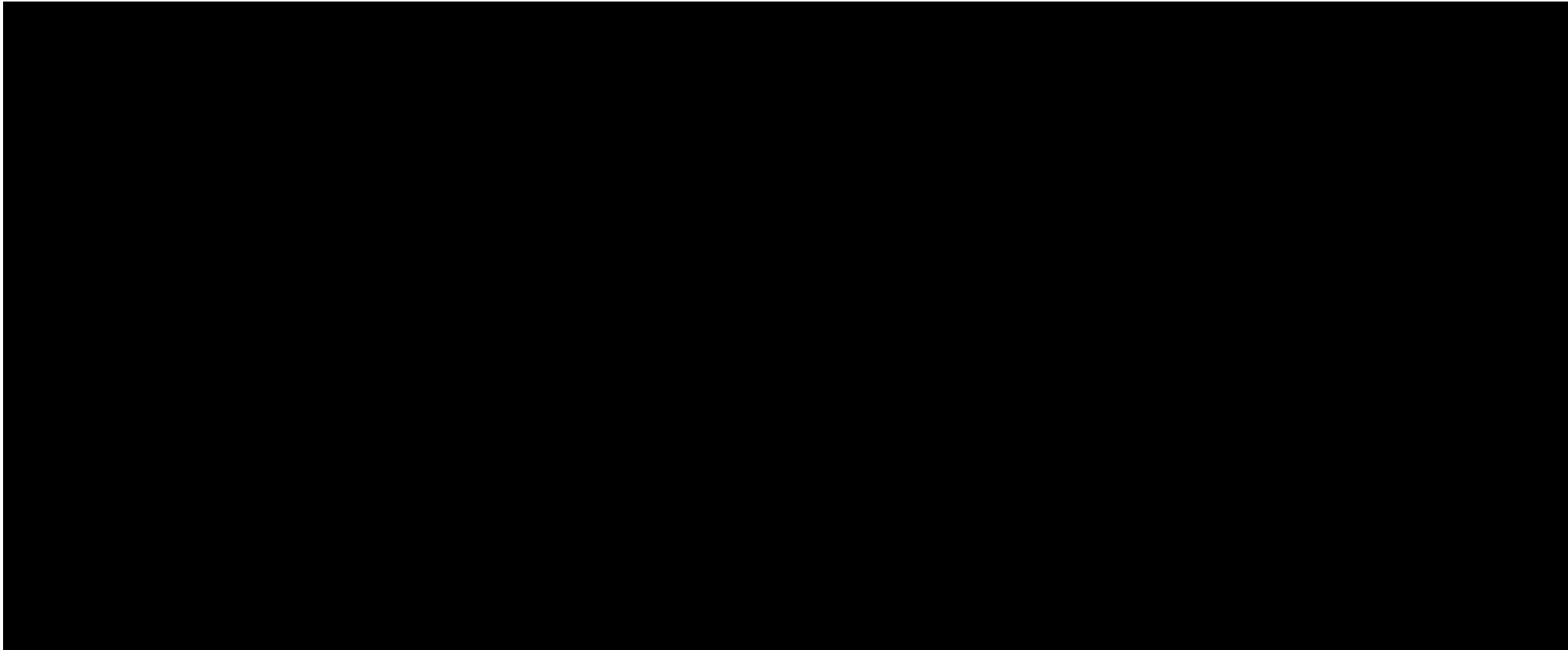
Clean area of betadine

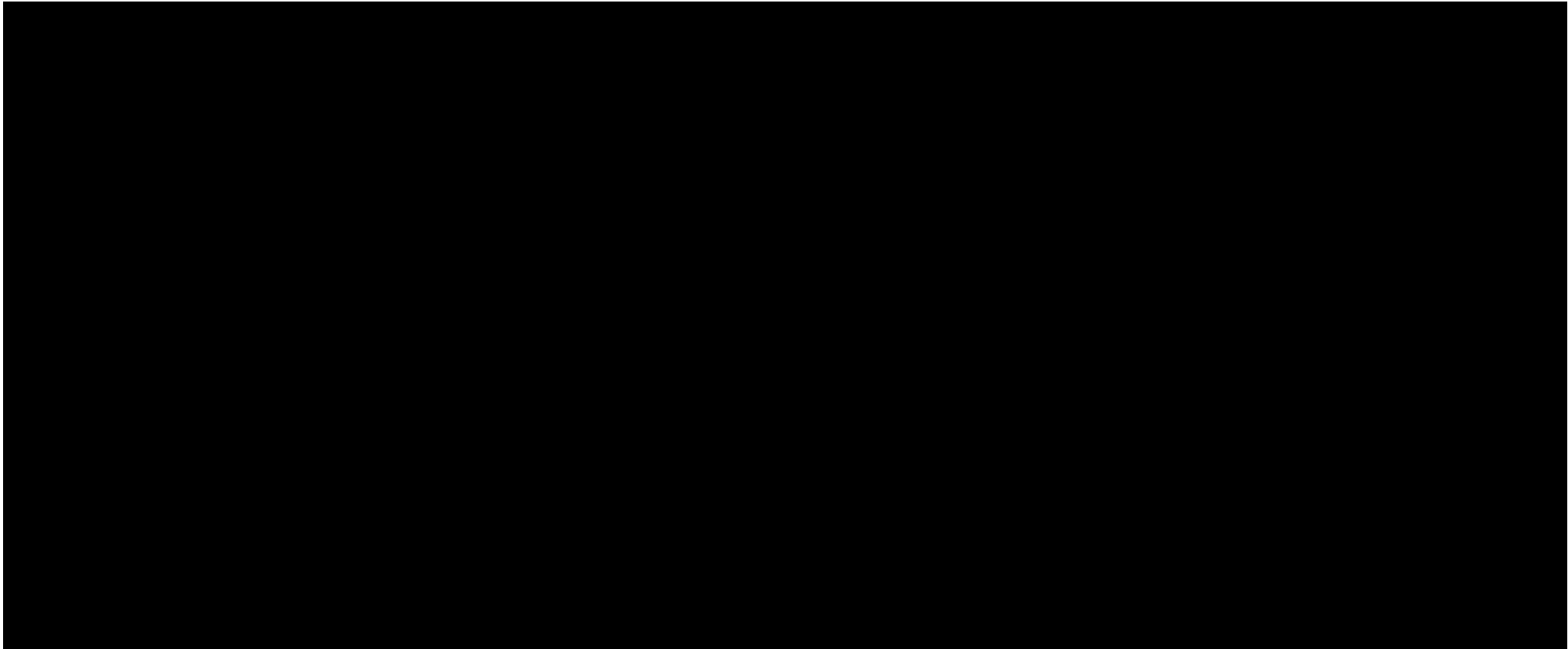
Apply antibiotic ung

Don't let patient jump and run as you sit them up!

Blood pressure and pulse post-op

Write op report in chart along with patient instructions on wound care and follow-up schedule





CODING FOR MINOR SURGERY

Approximate Allowables: (Oklahoma Novitas 3/22)

- 67840 \$254.59 Total Exc lid lesion
- 67810 \$159.25 Biopsy/Part Exc lid lesion
- 11200 \$82.99 Removal <16 skin tags
- 11310 \$106.02 Shave Exc < .5 cm
- 11900 \$52.26 Chal injection
- 67800 \$119.36 Chal I & C
- 67801 \$153.15 Chal Mult S Lid
- 67805 \$189.83 Chal Mult D Lid
- 67921 \$425.73 Repair of entropion, suture
- 67820 \$ 47.98 Epilation by forceps
- 67825 \$121.02 Epilation by other means RF

OD Surgery Clinic Coding

CPT	Description	Global Period	Reimbursement
11200	Removal of skin tags , multiple fibrocutaneous tags, any area; up to and including 15 lesions	10	\$82.99
11440	Excision, other benign lesion including margins, except skin tag (unless listed elsewhere), face , ears, eyelids, nose, lips, mucous membrane; excised diameter 0.5 cm or less	10	\$125.13
11441	Excised diameter 0.6 to 1.0 cm	10	\$157.29
11900	Injection , intralesional; up to and including 7 lesions	0	\$52.26
67800	Excision of chalazion; single	10	\$119.36
67801	Excision of chalazion, multiple, same lid	10	\$153.15
67805	Excision of chalazion; multiple, different lids	10	\$189.83
67810	Incisional biopsy of eyelid skin	0	\$159.25
67820	Correction of trichiasis; epilation, by forceps only	0	\$47.98
67825	Epilation by other than forceps (eg, by electrocauterization, cryotherapy, laser surgery)	10	\$121.02
67840	Excision of lesion of eyelid (except chalazion) without closure or with simple direct closure	10	\$254.59
67850	Destruction of lesion of lid margin (up to 1 cm)	10	\$199.95
67921	Repair of entropion; suture	90	\$425.73
68020	Incision of conjunctiva, drainage of cyst	10	\$113.07
68200	Subconjunctival injection	0	\$39.14
68760	Closure of the lacrimal punctum; by thermocauterization, ligation, or laser surgery	10	\$187.42
68761	Closure of the lacrimal punctum; by plug, each	10	\$138.03









Result Comments

f1 PRR Material
Material: submitted

f2 PART A Skin, left temporal, upper lid
PART B Skin, left upper brow
PRR Dx

.....
Diagnosis

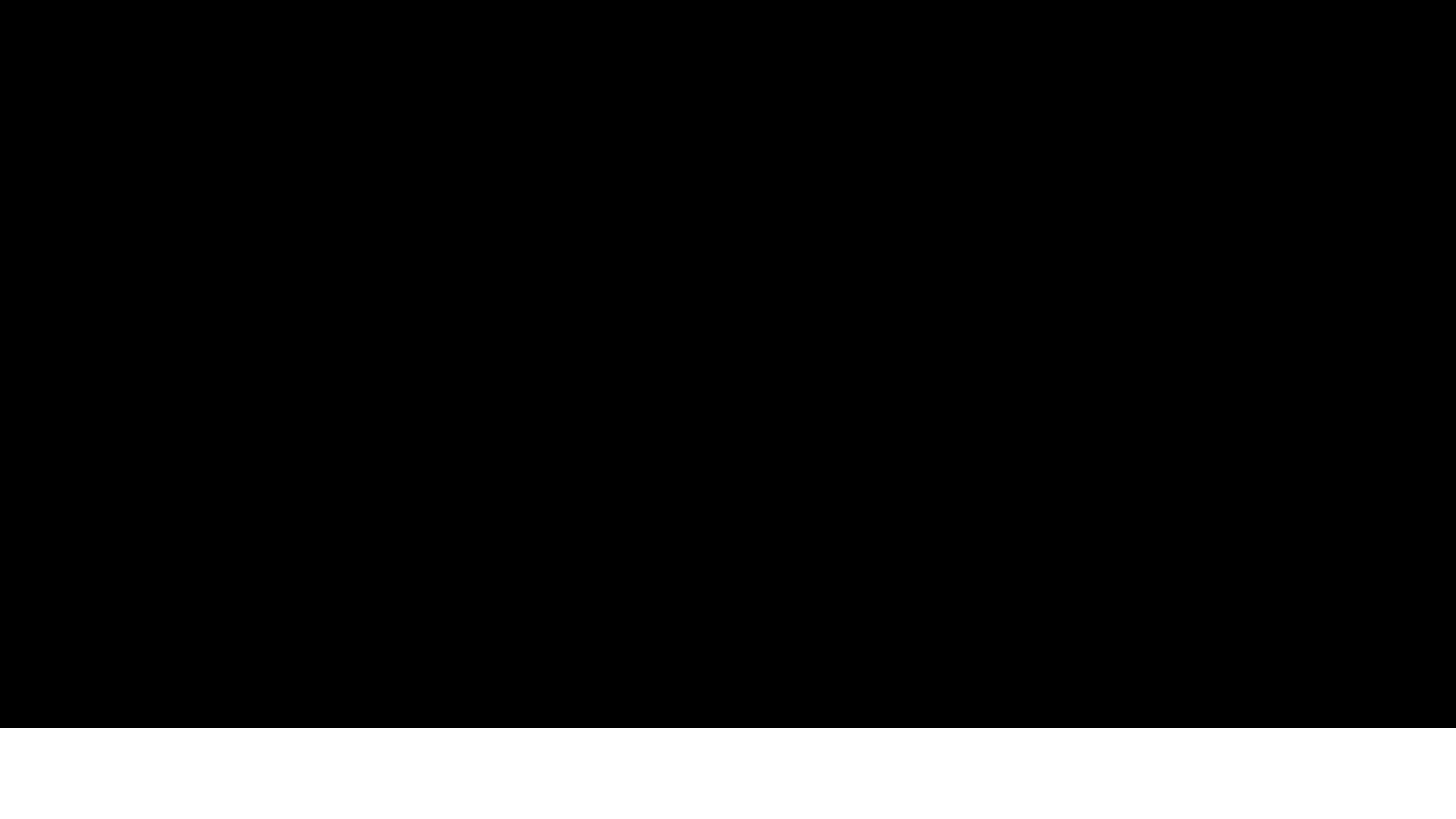
A Skin biopsy, left temporal, upper lid
Compound nevus

B Skin biopsy, left upper brow
Compound nevus

HBU/07:10/2017
.....

NL

7-12-17



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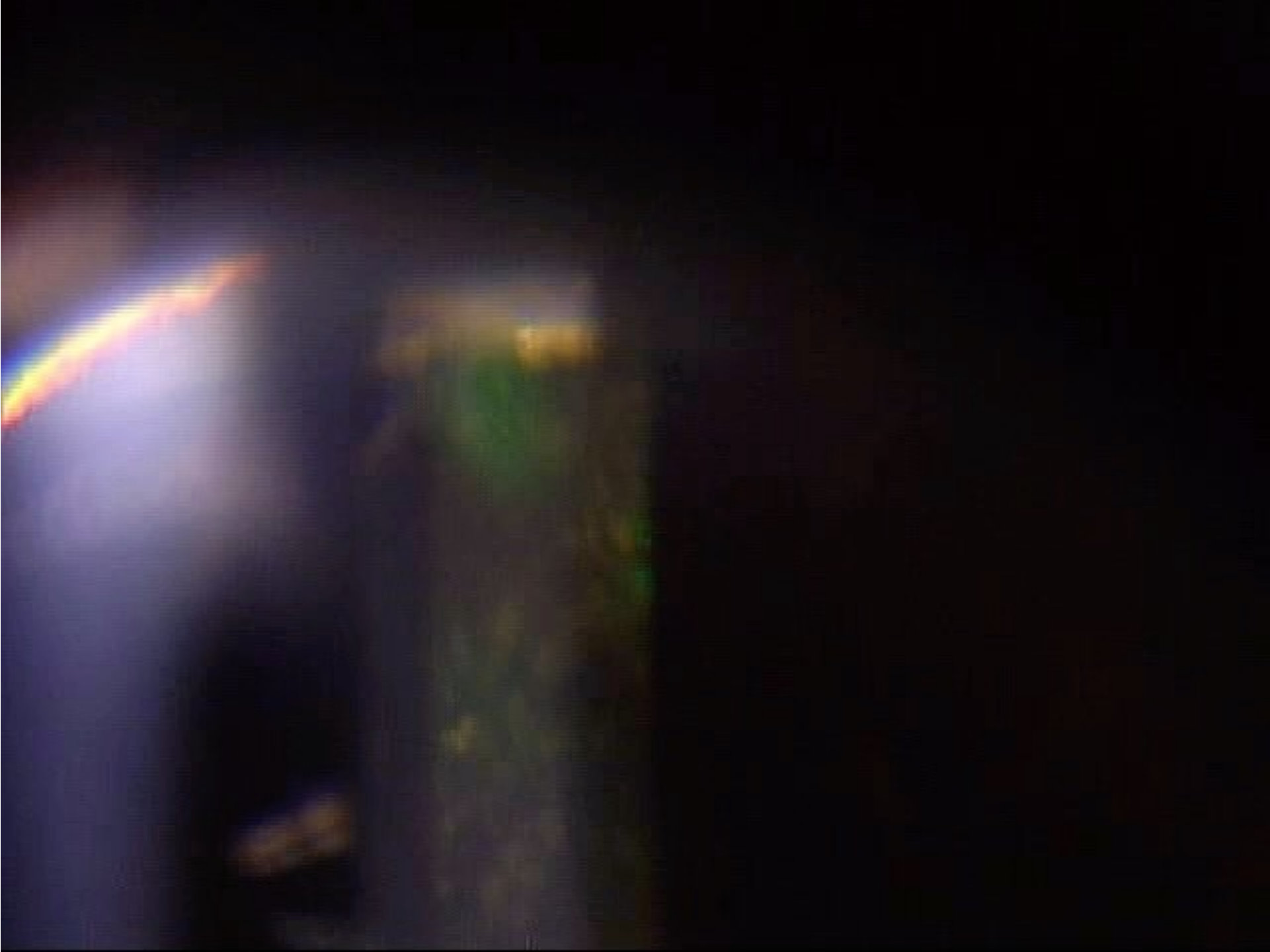
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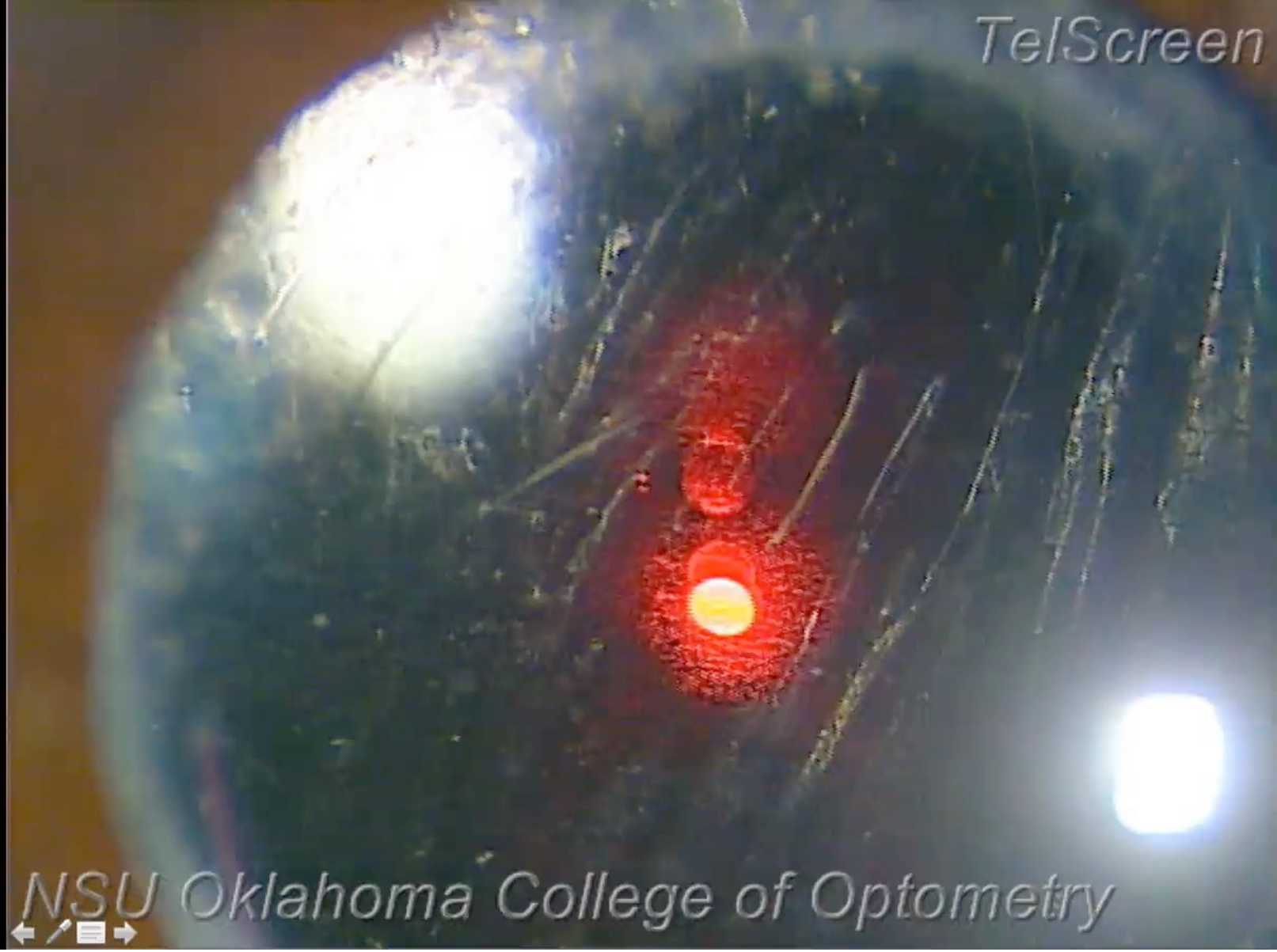


YAG CAPSULOTOMY





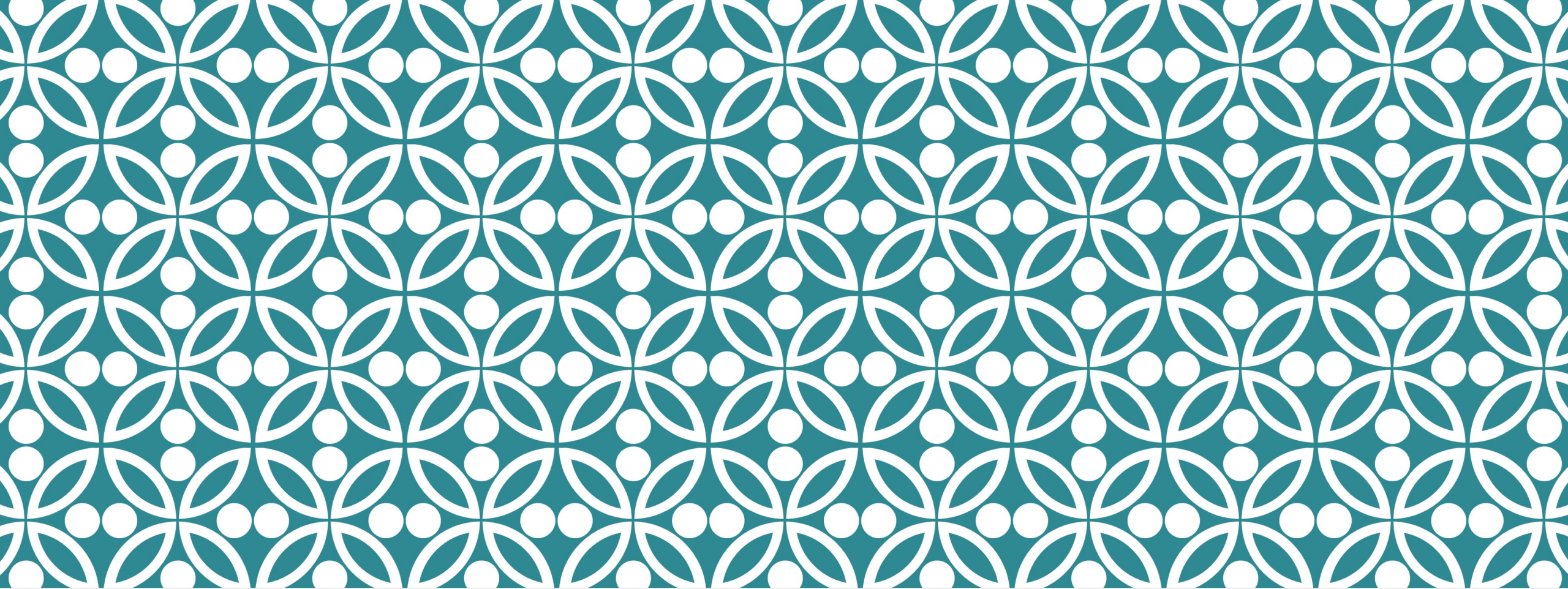
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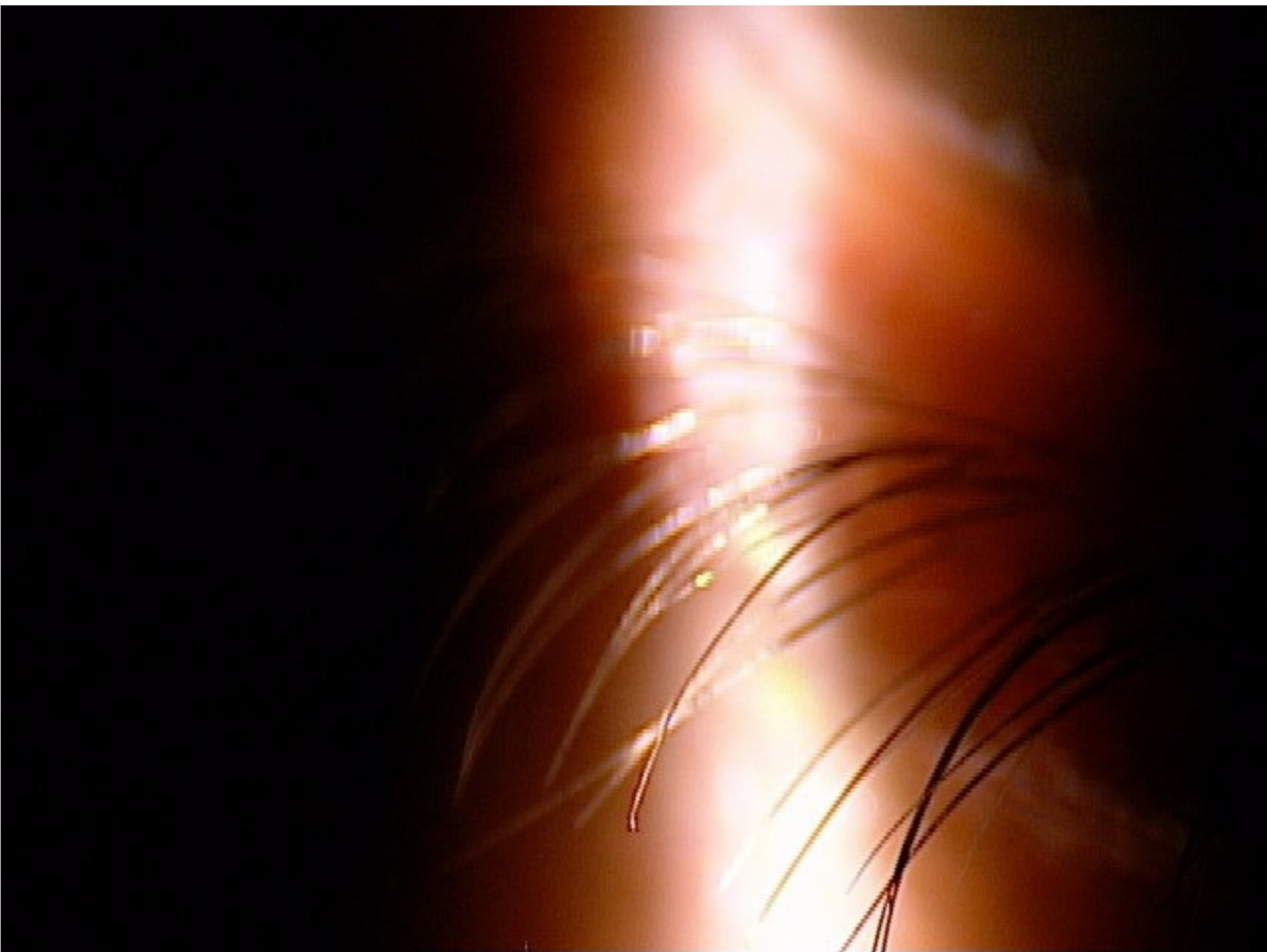


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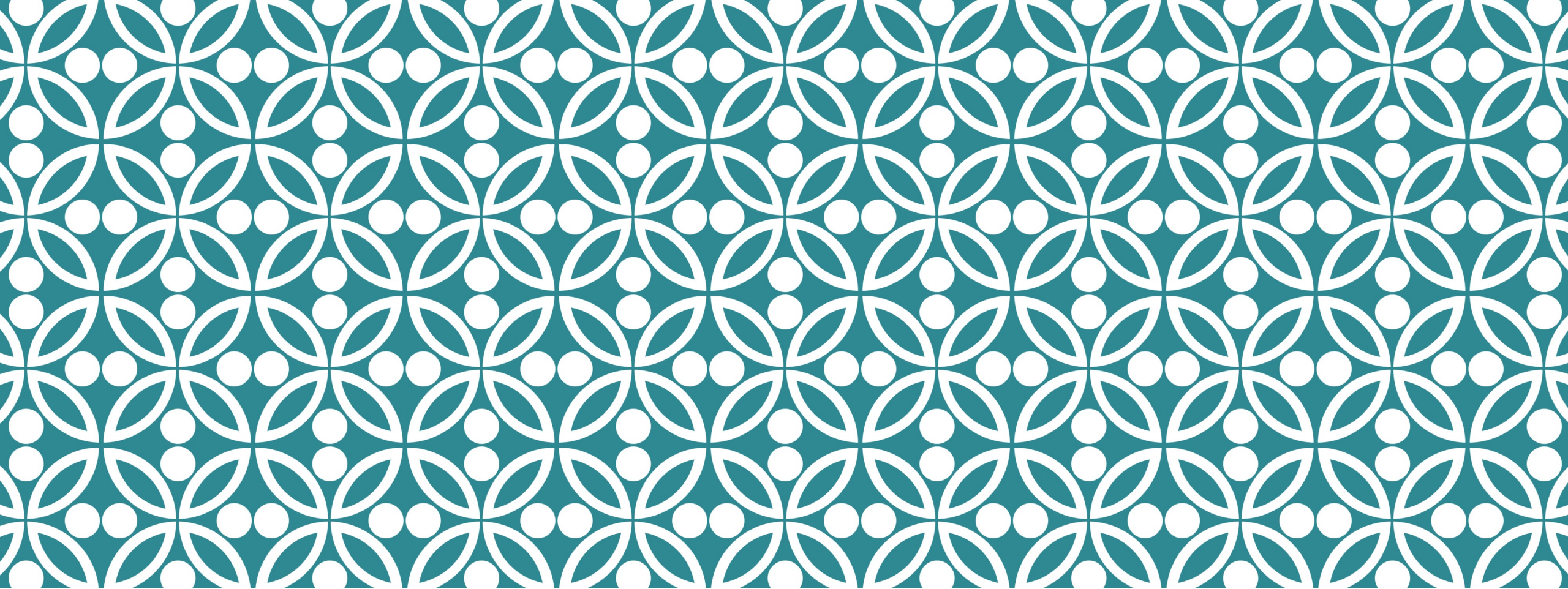
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SLT



Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial



Gus Gazzard, Evgenia Konstantakopoulou, David Garway-Heath, Anurag Garg, Victoria Vickerstaff, Rachael Hunter, Gareth Ambler, Catey Bunce, Richard Wormald, Neil Nathwani, Keith Barton, Gary Rubin, Marta Buszewicz; on behalf of the LiGHT Trial Study Group*

Summary

Background Primary open angle glaucoma and ocular hypertension are habitually treated with eye drops that lower intraocular pressure. Selective laser trabeculoplasty is a safe alternative but is rarely used as first-line treatment. We compared the two.

Methods In this observer-masked, randomised controlled trial treatment-naïve patients with open angle glaucoma or ocular hypertension and no ocular comorbidities were recruited between 2012 and 2014 at six UK hospitals. They were randomly allocated (web-based randomisation) to initial selective laser trabeculoplasty or to eye drops. An objective target intraocular pressure was set according to glaucoma severity. The primary outcome was health-related quality of life (HRQoL) at 3 years (assessed by EQ-5D). Secondary outcomes were cost and cost-effectiveness, disease-specific HRQoL, clinical effectiveness, and safety. Analysis was by intention to treat. This study is registered at controlled-trials.com (ISRCTN32038223).

Findings Of 718 patients enrolled, 356 were randomised to the selective laser trabeculoplasty and 362 to the eye drops group. 652 (91%) returned the primary outcome questionnaire at 36 months. Average EQ-5D score was 0·89 (SD 0·18) in the selective laser trabeculoplasty group versus 0·90 (SD 0·16) in the eye drops group, with no significant difference (difference 0·01, 95% CI -0·01 to 0·03; $p=0\cdot23$). At 36 months, 74·2% (95% CI 69·3–78·6) of patients in the selective laser trabeculoplasty group required no drops to maintain intraocular pressure at target. Eyes of patients in the selective laser trabeculoplasty group were within target intracocular pressure at more visits (93·0%) than in the eye drops group (91·3%), with glaucoma surgery to lower intraocular pressure required in none versus 11 patients. Over 36 months, from an ophthalmology cost perspective, there was a 97% probability of selective laser trabeculoplasty as first treatment being more cost-effective than eye drops first at a willingness to pay of £20 000 per quality-adjusted life-year gained.

Interpretation Selective laser trabeculoplasty should be offered as a first-line treatment for open angle glaucoma and ocular hypertension, supporting a change in clinical practice.

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*Names listed at the end of the Article

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Recent Ground Breaking 3-Year LiGHT Clinical Trial

SLT vs Eye Drops

CLINICAL CONCLUSION

"Selective Laser Trabeculoplasty (SLT) should be offered as first-line treatment for open angle glaucoma and ocular hypertension, supporting a change in clinical practice."



*Data available in reference article below

**QUALITY
OF LIFE**

The trial supports a longer drop-free period for patients when treated with SLT, which may confer significant benefits to your patient's quality of life.

LIGHT TRIAL 6 YEAR DATA

Released Sept 2022

At 6 years:

- No significant difference in health related quality of life (HRQL) in 3 of the 4 questionnaires
- SLT had better scores in the GSS (glaucoma symptoms scores) quality of life measurement
- 69.8% of SLT patients remained at or below target without other intervention
- More eyes in the drop arm exhibited disease progression (26.8% vs 19.6%)***
- Trabeculectomy required in 32 eyes in drop arm, 13 eyes in SLT arm
- More cataract surgeries in the drop arm (95 compared to 57) – statistically significant
- No serious laser related adverse events

Conclusion

- SLT is a safe treatment for OAG and OHT, providing better long-term disease control than initial drop therapy, with reduced need for incisional glaucoma and cataract surgery over 6 years.

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