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Radio surgery used to treat trichiasis efficiently

The general ophthalmologist can treat trichiasis. Discover the best kept secret in ophthalmology.

by John M. Haley, MD
Special to OCULAR SURGERY NEWS

There have been many articles describing a complete historical review of the treatment methods for trichiasis; for example, see "Trichiasis can be treated in different way," by Mark R. Levine, MD (OCULAR SURGERY NEWS, Jan. 1, 1997, page 58). However, most techniques are expensive, time consuming, require extensive postop follow-up and represent overkill. In these austere days of reduced Medicare fee schedules and managed care, we must find a more efficient and efficacious solution. Fortunately, that solution exists, and I consider it the best kept secret in ophthalmology: Ellman radio surgery.

Ellman International (Long Island, New York) produces and sells directely the Surgitron, which generates a well controlled, high frequency cutting current that can be used with a variety of specialized electrodes. Ellman radio surgery should not be confused with the old time tested hyfrecator, a very gross cutting electrocautery with no control whatsoever and no fine electrodes. The Surgitron has five cutting currents, as shown in the table.

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Surgical Maneuvers

Step-by-step illustrated surgical techniques.

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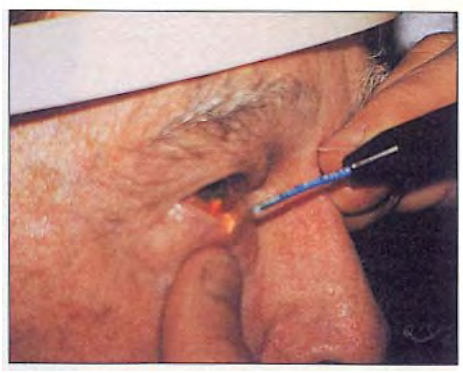
Blended cutting and coagulation

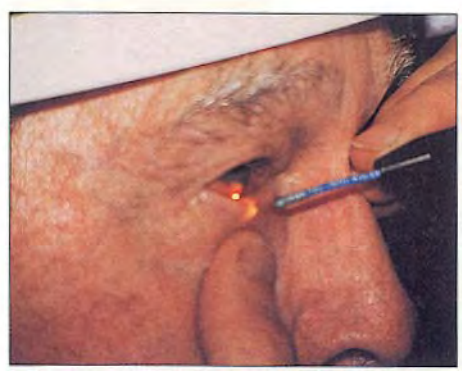
Blended cutting and coagulation is the most useful setting in my hands. Using one of the large loop wire electrodes almost any eyelid or conjunctival tumor (or face, back or body lesion for personal use) can be quickly removed without bleeding and without the need for surgical wound closure.

The fine straight or varitip bendable electrodes are perfect for permanent punctal closure where you core out the epithelium of the vertical portion of the canaliculus, allowing it to permanently scar closed. Argon laser punctal closure is an expensive, cruel joke after using the Ellman unit, which is cheaper, quicker and more effective – and I've never seen a failure.

I have used the unit for 10 years and have never had to resort to cryosurgery or surgical techniques in the treatment of trichia sis. My old liquid N_2 and NO_2 probes are gathering dust, thankfully, as they create severe postop tissue reactions and cause patient concern. I have treated extensive areas of trichiasis involving most of the lid, as in ocular pemphigoid and Stevens-Johnson syndrome, and small, thin lashes (lanugo hairs) with ease. Occasional recurrences can easily be treated in a matter of seconds.

Examples of slit lamp positioning.





Treatment of trichiasis with eyelid everted under slit lamp control.

General procedure

The secret is to use the delicate 1/16-in shaft thin wire (TA^1, TA^2 or TA^3) non-insulated electrodes under slit lamp control. Do not use the insulated trichiasis electrode because it is difficult to feed down the hair follicle and is very time consuming. You will only make that mistake once. Inject Xylocaine (lidocaine HCl, Astra) into the skin anterior to the involved lashes. After a few minutes, position the patient at the slit lamp with an assistant holding the patient's head in place. Reassure the patient and warn of the burning odor and zap sound to prevent patient movement. At the slit lamp slightly evert the lid and with the Surgitron in position 2 with the power of about 1.5 to 2, direct the naked (non-insulated) electrode adjacent and parallel with the hair and cut down 2 mm into the lid to the follicle base and core it out (3 seconds if you are slow). Apply just enough power so the electrode enters the tissue easily. Do not char or bubble the tissue. You can literally look down the hole with the slit lamp. You can treat 15 to 20 lashes in several minutes. No postop medication or care is required. Only minimal lid swelling occurs postop, and the patient is normal within several days.

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Follow-up care

I usually see patients back about 1 month later and re-treat any missed or regrown lashes (typically less than 10% recurrence). I have never seen more than minimal eyelid scarring and have seen no cases of cicatricial ectropion, even with extensive eyelash removal. I have never in 10 years had to resort to the more extensive procedures described in the article mentioned above. Of course, in these days of global fee periods, the lack of postop care is a big plus.

I expect once the word gets around, the trichiasis referrals to ophthalmic plastic surgeons will dry up, as general ophthalmologists can and should perform Ellman radio surgery with ease. The best kept secret is escaping. ■

Cutting currents of Ellman Surgitron

Type of current	Used for:
Pure filtered waveform (pure micro-smooth cutting)	Skin incisions, biopsy, cysts, abscesses, tumors, cosmetic repairs, development of skin flaps, skin tags, nevi, keratosis, oculoplastic procedures, blepharoplasty, aponeurotic repair, levator resection
Fully rectified waveform (blended cutting and coagulation)	Skin tags, papilloma, keloids, keratosis, verrucae, basal cell carcinoma, nevi, skin tags, fistulas, epithelioma, cosmetic repairs, cysts, abscesses, development of skin flaps, oculoplastic procedures
Partially rectified waveform (hospital-type control of bleeders)	Hemostasis, epilation, telangiectasia
Fulgurating current (spark-gap type tissue destruction)	Basal cell carcinoma, papilloma, cyst destruction, tumors, verrucae, hemostasis
Bipolar coagulator	Precise, pinpoint coagulation for micro-surgery. Pinpoint hemostasis in any field, wet or dry