

Plastic and Reconstructive Surgery of the Head and Neck

Proceedings of the Fifth International Symposium

CHAPTER 120

Management of Superficial Skin Lesions in a Cosmetic Surgery Practice

S. RANDOLPH WALDMAN, M.D., F.A.C.S.

Perhaps the most common complaint seen by the facial plastic surgeon involves a wide variety of superficial skin lesions. In most instances, the experienced surgeon has a fairly good idea of the nature of the lesion, especially whether it is benign or malignant. Despite this, the majority of surgeons continue to remove these lesions using a standard elliptical excision technique. Although this method of removal is well accepted within the medical community, particularly among surgeons, there are some disadvantages. These include the necessity for sutures and suture removal, scarring, time spent, and cost to the patient.

Adopting a treatment protocol from our dermatology colleagues, we treat all obviously benign superficial lesions including nevi, keratoses, and verrucae by shave excision in combination with electrocurettage. This technique has the advantage of limited if any scarring, minimal time for surgery and postoperative care, and limited cost to the patient.

Electrocurettage combines the old dermatologic art of curettage with modern radiosurgical technology. The equipment required is simple. We use an Ellman Surgitron, which was originally designed by Irving Ellman, M.D., in the late 1970s and is currently marketed by Ellman International, Hewlett, NY. The unit weighs a couple pounds, is extremely portable, (Fig. 120-1A).

We have used this unit to remove over 3,000 benign skin lesions during the past 6 years. The Surgitron develops a wave of electrons (2 to 4 MHz) that leaves the unit through the handpiece, i.e., the active working electrode, enters the tissue, and moves to the passive electrode or ground plate. As a grounding plate, we use a convenient wrist band, which eliminates the need for messy electrode gel or other solutions. The Ellman unit permits selection of three current varieties: (1) a fully rectified, filtered current for cutting; (2) a fully rectified, nonfiltered current for cutting and coagula-

tion in combination; and (3) a partially rectified, nonfiltered current for coagulation and hemostasis only (Fig. 120-1B).

The technique we use is extremely simple although like any other procedure it takes experience to become proficient and there are tricks that one must learn. When the patient comes to our office initially, we carefully evaluate each lesion that he or she is concerned about. If we are particularly suspicious about the pathology of a specific lesion, then we should consider an excisional approach to obtain adequate margins.

When we discuss electrocurettage with patients, we advise them that this is the simplest and least expensive alternative. We stress that wound healing is superior to that with the excisional approach and state that at the very worst the patient will be left with a small circular area that may be slightly lighter in color than the surrounding skin. It is rare for any significant wound depression to exist. We advise patients that we err on the conservative side to avoid full penetration of the dermis and that we need to see them in 4 to 6 weeks at which time a small touch-up procedure may be necessary. Additionally, we stress that any hairs initially present within a nevus will require electrolysis for permanent removal.

MATERIALS AND METHODS

We first anesthetize each lesion with 1 percent Xylocaine with 1:100,000 epinephrine diluted with sodium bicarbonate to decrease the stinging sensation. Holding the skin taut, we insert a 30-gauge needle next to the lesion at right angles to it and we direct the needle immediately under the lesion in the dermis. A noticeable blush should occur. While we are waiting for the local anesthesia to work, we document the location of all the lesions that we will remove on a diagram that becomes part of the patient's permanent record. We also

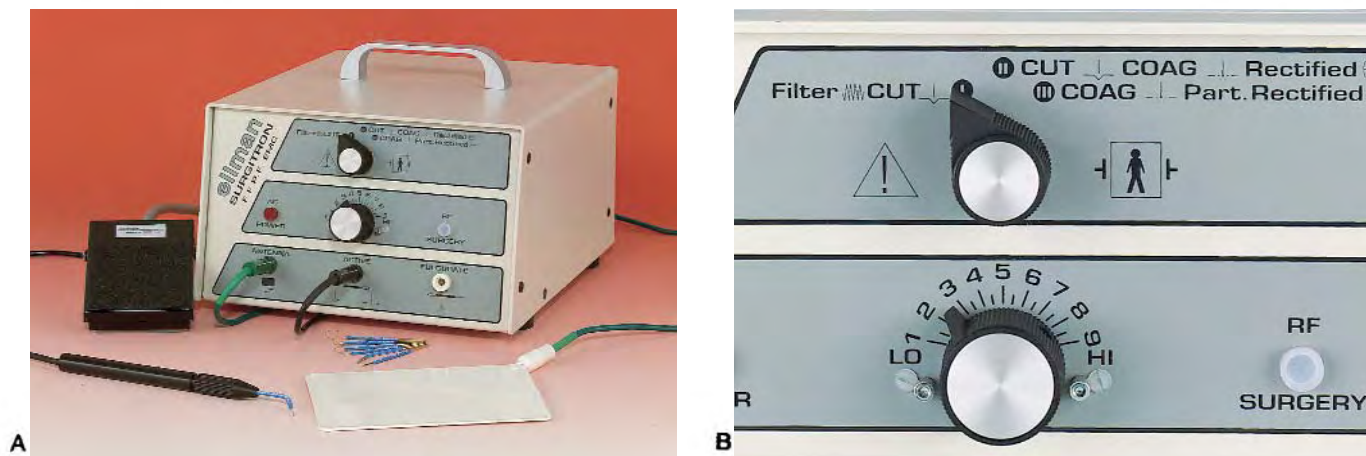


Figure 120-1. *A*, The Ellman Surgitron weighs only a couple of pounds, is extremely portable. *B*, The Ellman Surgitron unit permits the selection of several different currents.

note whether these lesions are to be sent to the pathologist for evaluation, and place a corresponding number on the pathology slip and the diagram to identify such lesions.

To begin the procedure, the Surgitron handle and attached loop are held in the right hand much the way one would hold a writing pen. It is extremely important to brace the side of the hand and the fifth finger against the patient's skin surface in case the patient suddenly moves and also to steady the surgeon's hand. We initially use a thin wire loop electrode activated by the pure cutting current of the Surgitron to remove the bulk of the lesion. The electrode is always held at a right angle to the skin and it is helpful to activate the electrode before actually contacting the lesion. It is important to apply firm traction around the lesion with the thumb and forefinger and care must be taken to avoid penetration of the electrode below the skin surface (Fig. 120-2A). We have also found it helpful to moisten the site of radiosurgery

with a saline compress to decrease tissue drag. Once the bulk of the lesion has been removed, it is submitted to the pathologist for study. Because the amount of lateral heat generated by the filtered cutting current is minimal, this tissue is essentially undamaged and an easy diagnosis can be made.

The unit is then turned to the combination cutting-coagulation current (fully rectified, nonfiltered) and the current set at the lowest possible setting that allows the electrode to glide through the tissue without excessive drag or tissue shredding. Light, continuous strokes, such as those used by an artist, are used to remove the remainder of the nevus. When it appears as if most of the lesion has been removed, a moistened 2 × 2 gauze sponge is used to abrade the surface to remove any carbonized tissue and to allow the surgeon to determine if any residual lesion remains.

It is at this point that we relax skin tension, so that we may observe skin contour, especially any persistent elevation

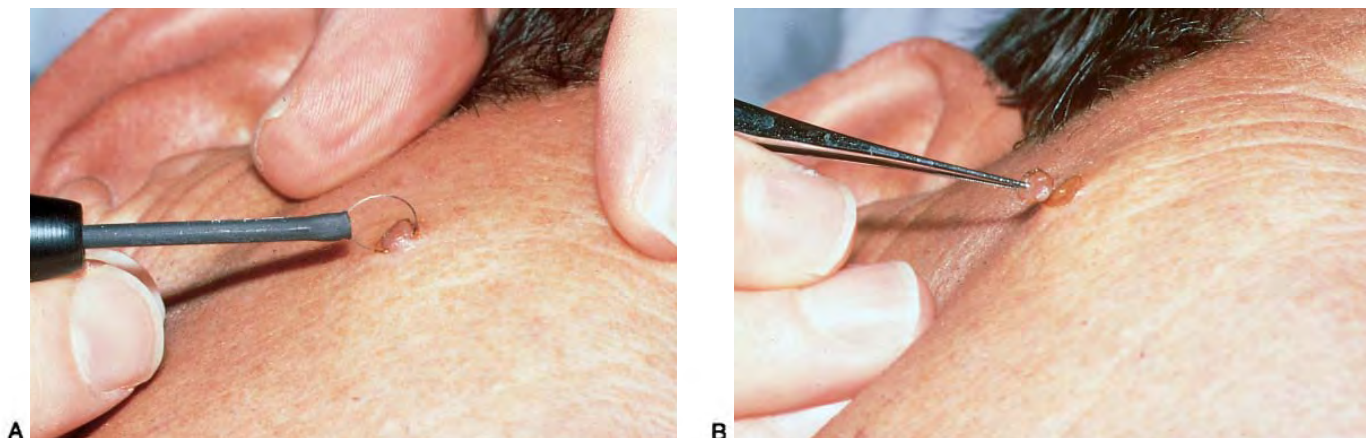


Figure 120-2. *A*, The thin wire loop is used to remove tissue for pathology. *B*, The remainder of the lesion is removed using the light, continuous strokes of an artist.

of the lesion above the surrounding skin. Any remaining curettage is done without applying any tension to the skin. Usually we extend the dissection into the skin immediately surrounding the lesion to avoid any significant step-offs in contour. There is usually little if any bleeding to obstruct our vision, but if this becomes bothersome, the unit can be turned to the straight coagulation current and the bleeding can be easily controlled without damaging the underlying or surrounding tissue. If char debris does build up on the electrode loop, as it often does, we gently remove it with a moist sponge, taking care to avoid damage to the wire. These loops can be resterilized after every case and if handled carefully, can often be used to remove up to 50 or more lesions. The two electrodes that we utilize most often are the 6 mm thin wire loop and the diamond-shaped wire, but this can vary according to the size of the lesion.

Postoperative care is extremely simple. We instruct patients to apply Polysporin ointment for 10 days and let them shower and resume normal activity immediately. We tell them the wound will be red for several weeks and should gradually fade in color like any blister or burn. Their initial postoperative appointment is in 4 to 6 weeks, at which time we examine the lesion to be sure that it has been completely removed. If it has not, then a brief touch-up procedure is done at that time. Patients are also advised that on occasion a small amount of residual pigmentation resembling a freckle may remain, and that we consider this acceptable. They are advised that more aggressive treatment might lead to scarring (Figs. 120-3A and B, 120-4A and B, 120-5A and B).

RESULTS

We have now used this technique for 6 years in a private facial plastic surgery practice. In all, 749 patients including 530 females and 219 males have had over 3000 lesions removed. Although the overwhelming majority of these lesions were intradermal nevi or large skin tags, we have also removed a number of other surface lesions including small hemangiomas, verrucae, papillomata, junctional nevi, compound nevi, seborrheic keratoses, and actinic keratoses. To date the only complications involve seven patients who developed periexcisional inflammation that was significant enough to require oral antibiotics. In addition, approximately 2 to 3 percent of patients required additional touch-up procedures because of incomplete removal of the lesion. In a few patients, the touch-up procedure required an excisional technique rather than additional electrocurettage. Unacceptable scarring has not been a problem in our series of patients.

CONCLUSION

We are advocating a simple, well-established method of treating benign superficial facial lesions. In our opinion, this represents benign treatment of benign lesions. Patient acceptance has been outstanding and the cosmetic result is clearly superior in most cases to that obtained using the traditional excisional technique. This simple technique provides an excellent source of patient referral and increased patient flow. This result is especially important in the developing phase of a cosmetic surgery practice.



Figure 120-3. A, Intradermal nevus on the nasal tip of a white man. B, Appearance of nose 6 months after electrocurettage.



Figure 120-4. *A*, Intradermal nevus involving the skin surface of the upper lip of a black woman. *B*, Six months following removal of intradermal nevus with electrocurettage.



Figure 120-5. *A*, Intradermal nevi on the forehead of a white woman. *B*, Six months following removal of forehead nevi with electrocurettage.

REFERENCES

1. Garito J. Radiosurgery. Personal communication, April, 1989.
2. Sebben J. Electrosurgery: High-frequency modulation. *J Dermatol Surg Oncol* 1988; 14:367-371.
3. Sebben J. Electrosurgery principles: Cutting current and cutaneous surgery—Part I. *J Dermatol Surg Oncol* 1988; 14:29-32.
4. Sebben J. Electrosurgery principles: Cutting current and cutaneous surgery—Part II. *J Dermatol Surg Oncol* 1988; 14:147-150.
5. Wyre HW, Stoler R. Extirpation of warts by a loop cautery and cutting current. *J Dermatol Surg Oncol* 1977; 3:520-522.