"LIP SHAVE" OR VERMILIONECTOMY: INDICATIONS
AND TECHNIQUE

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The vermilionectomy, also and better known colloquially as the "lip shave," "lip peel," or "lip scalp" operation, refers to the elliptical, horizontal excision of the exposed mucous membrane or vermilion of the lip, generally of the lower one, with resurfacing or "retreading" of the surgically created defect by the advancement of the undermined labial mucosa, thereby providing "fresh" covering which will tolerate many more years of wear. This relatively simple, well-standardised, non-deforming plastic procedure of short duration, usually performed on an out-patient basis under local anaesthesia, has not yet received the general notice that its importance warrants, not only in the prophylaxis of lip cancer but also in the correction of a varied number of lip deformities. For these reasons a brief review was deemed justified to re-emphasise the value of this basic procedure and to outline its principal indications and essential details of operative technique.

It is difficult to establish priority for this operation which was briefly mentioned in a few lines in Bryant's "Operative Surgery" of 1906, but not adequately described, and was doubtless in use long before then but receives no mention in most modern textbooks of general surgery or even medical dictionaries, though it is by no means a discarded or obsolete procedure. On the contrary newer applications have greatly extended its usefulness beyond that of mere surgical treatment of thickened, irreversible leukoplakia of the lip vermilion which still remains, however, one of its most important and common indications.

INDICATIONS

1. Precancerosis of lip vermilion (leukoplakia, keratoses, chronic solar or actinic cheilitis, radiation ulcers, cutaneous horns, chronic fissures, cheilitis glandularis, etc.).
2. Superficial or multicentric malignancy of lip vermilion, and in situ or non-invasive carcinoma of lip vermilion.
5. Replacement of traumatic losses of vermilion including animal or human "kiss bites."
6. Neoplastic hypertrophy (haemangioma, lymphangioma) limited to vermilion.
7. Congenital pits of lower lip (mucous cysts—"fish lips").
8. Diffuse pigmentation of lip (lentigo).

"Lip Shave" combined with other Procedures

9. Extensive scarring of upper lip vermilion; combined with Gillies' procedure for recreating cupid's bow of upper lip.
10. Squamous-cell epithelioma of lip associated with leukoplakia of remainder of lip; V-resection combined with vermilionectomy.

11. Inflammatory hypertrophy of lip (chronic lymphoedema); "lip shave" combined with subcutaneous "filleting" procedure to reduce bulk of lip tissue beneath skin.

12. Transplantation flaps (unipedicled or bipedicled) for deficiencies of the vermilion border of the other lip.

Whenever removal of a considerable portion of the vermilion border of the lip is necessary because of disease or redundancy, this can be most expeditiously accomplished with minimal deformity by the "lip shave" operation which, except for slight, often desirable, attenuation of the vermilion, produces a most satisfactory and normal appearing lip. It is certainly ill-advised to remove a patch of localized leukoplakia when the entire lip border shows similar changes necessitating further subsequent intervention. Not infrequently patients with asymptomatic leukoplakia who have refused a "lip shave" as an "unnecessary" operation have returned years later with a fungating lip carcinoma and metastatic cervical glands, underlining the fact that thickened leukoplakia cannot be viewed with equanimity, and it is the moral duty of the physician to advise its energetic removal and to urge periodic examinations for the detection of new areas. It is the natural history of the disease to be recurrent and multiple, and to give rise to multicentric malignancy, similar to intestinal polyposis—the unfortunate possessor of which is likewise sitting on a "dynamite keg" that might explode at any time.

Other precancerous conditions, particularly post-radiation ulcerations, must also be treated with the greatest respect. Without microscopic examination it is often impossible clinically to differentiate a chronic radiation reaction from a malignancy. Indeed, in an appreciable percentage of cases severe radiation reactions eventually undergo malignant transformation anyway, so their early removal becomes mandatory for cancer prophylaxis.

The "lip shave" can also be employed to advantage when for any other reasons resurfacing of the entire vermilion border of the lip is desirable as, for example, in cheilitis glandularis apostematosa (myxadenitis labialis, cheilitis glandularis), a condition characterised by hypertrophy and dilation of the mucous glands and ducts, the orifices of which may present a sieve-like appearance and become encrusted with inspissated secretions. Swelling and tenderness from chronic inflammation are not uncommon. Pressure on the palpable mucous glands will cause droplets of mucus to exude from the patulous duct opening. This rather rare condition has been considered precancerous by some. The individual removal of the separate glands with a cutaneous punch, as has been suggested, would be followed by much more irregular and objectionable scarring than would occur from a vermilionectomy, in which event the hairline scar becomes virtually imperceptible after a time, and may be noticed only when the lip is tensed by the tongue causing it to stand out as a faint, whitish line at the mucocutaneous border.

A "lip shave" can also be advantageously utilised in bilateral congenital pits (mucous cysts) of the lower lip and to reduce the bulk of the lip as in cases of congenital hypertrophy, particularly of the lower lip, the so-called "Hapsburg lip," or in negroid type of lip with excessive exposure of the lower vermilion frequently almost constituting an ectropion. The standard procedure ordinarily recommended has been a resection of a concealed wedge of mucosa within the lip to obviate the external scar, but since this is minimal in a "lip shave" it is felt that a better and
Fig. 1.—Congenital hypertrophy of lips with "double upper lip." A redundant or duplicated fold partially concealing teeth like a curtain when mouth is opened.

Fig. 2.—Area of excision outlined on vermilion with methylene blue guide lines. Note leukoplakic thickening.

Fig. 3.—Upper lip mucosa partially "pealed" or excised.

Fig. 4.—Mucosa of vermilion border completely denuded.

Fig. 5.—Three key sutures inserted into mobilised and advanced labial flap to ensure symmetrical closure.

Fig. 6.—Closure of defect completed with interrupted, closely placed 5-0 silk sutures.
more accurate correction can be achieved by removal of the exposed vermilion which is not infrequently the site of cheilitis because of habitual lip-moistening with its resultant drying and cracking.

**Operative Technique**

After surgical preparation of the field with Phisohex and some colourless antiseptic solution, and after appropriate draping, the exposed area of lip vermilion to be excised is first outlined with a methylene blue guide mark, after which the underlying tissues are locally infiltrated and edematized with $\frac{1}{2}$ per cent. procaine (novocaine) or 1 per cent. xylocaine hydrochloride with adrenaline solution, four drops to the ounce for hemostasis. The outlined mark is incised throughout its entire extent while the lip is firmly immobilized with the thumb and index finger of the free hand, care being taken to make vertical rather than oblique shelving incisions so that subsequent closure will be facilitated and hypertrophic scarring prevented. After the mucosa is first elevated by sharp dissection from one corner it can then most conveniently be removed by curved, pointed scissors down to the muscular layer. In cases of superficial malignancy even a deeper resection can be performed without impairing the watertight closure of the lips or jeopardizing the cosmetic result. Frequently, globular or hypertrophic mucous glands will protrude into the wound from the cut edges. Some operators will routinely avulse all these glands to obviate their occasional cyst formation or subsequent overactivity with the production of crusting along the new mucocutaneous junction or the objectionable appearance of glairy droplets of mucus on the lip which thereby appears to be "sweating." Other operators will remove only the mucous glands falling within the suture line. After hemostasis has been secured with 3-0 plain catgut ties the labial mucosa is undermined for an appropriate
distance down to the deep muscular plane, the surgically created defect being closed by the advancement and approximation of this mobilised flap which is then united to the cutaneous edge. To achieve an even and symmetrical closure three "key sutures" are first inserted, the first in the mid-portion of the lip and the remaining two bisecting the distance between the first suture and the commissures. The other interrupted simple sutures of 5-0 black silk can then be inserted consecutively and close-spaced 2 to 3 mm. from the wound edge. The cutaneous knots should not overlay the suture line so as not to retard healing. Post-operatively, the patient may be ambulatory and is given several prophylactic penicillin injections and advised to use the lips as little as possible. The wound is kept moist during the day with frequently changed dressings of sterile normal saline which contribute considerably to the patient's comfort. At night a thick layer of aureomycin ointment can be applied to the suture line to prevent crusting and infection. In three days alternate sutures may be removed, and the remaining ones on the following day if healing is progressing satisfactorily. If the knots have been too tightly tied the stitches may cut through and cross-hatch the wound after reactive post-operative oedema occurs. It is essential that buried knots be carefully removed to avoid "stitch abscesses" from developing which will, of course, vitiate a perfect result and cause unnecessary and conspicuous

Figs. 8 to 13

Fig. 8.—Chronic burn scars with multiple ulcers of vermilion of lower lip which proved to be malignant.
Fig. 9.—Semilunar area of vermilion to be excised indicated by dye.
Fig. 10.—Appearance after excision of lower lip vermilion. Observe globular mucous glands beneath upper cut border.
Fig. 11.—Labial flap deeply undermined prior to advancement.
Fig. 12.—First stage in closure with three equispaced sutures anchoring flap to cutaneous margin for creation of new vermilion border.
Fig. 13.—Immediate post-operative appearance of newly reconstructed lower lip vermilion.
scarring. The healing is almost uniformly uneventful, and the linear mucocutaneous scar is quite imperceptible after several months. The patient is instructed to keep the resurfaced lip well lubricated with Vaseline, lanolin, or similar preparations for quite some time post-operatively, and is advised to avoid undue exposure to the sun.

The "lip shave" may be performed as an isolated procedure on the upper or lower lip, or both, the last generally being done at separate times. The vermilionectomy may be also combined with a V-resection which is indicated when leukoplakia of the lip is associated with a frank malignancy. Failure to perform the "lip shave" is the cause of many so-called "recurrences" which rather may represent the development of new or independent malignancies.

In a combined V-resection and a "lip shave" the closure of the V-defect should be carried out first, approximating the muscular layer securely with interrupted 3-0 chromic catgut to reconstitute the important orbicular ring so essential for a functioning, watertight mouth. The "lip shave" can also be combined with a Gillies' procedure for recreating the "cupid's bow" of a scarred upper lip and with a "filleting" procedure in chronic lymphœdema of the upper lip to reduce the bulk of subcutaneous tissue. The vermilion of one lip can be transplanted to the other in cases of deficiency as a bipedicled or unipedicled
flap. In selected cases of traumatic losses of segments of lip vermilion, as in the so-called animal or human "kiss bites," the "lip shave" offers an acceptable method of primary or late repair by reason of its symmetrical appearance and inconspicuous scar, as other types of repair may produce a notched or "whistle" deformity.

SUMMARY

Excision of the exposed mucosa or vermilion of the lips can be readily and safely performed under local anaesthesia and is particularly indicated in situations requiring resurfacing of the lip, notably extensive precancerous leukoplakia or chronic solar cheilitis—the chronic sunburn of the weather-beaten "farmer's or sailor's skin" or "tropical skin" of the inhabitants of sunny climates. The "lip shave" can also be employed for reduction of lip size in hypertrophy and should be combined with a V-resection whenever frank epithelioma is associated with leukoplakia of the remainder of the lip in order to prevent the occurrence of a new lesion elsewhere on the lip.

The "lip shave" is thus a non-deforming plastic operation of great value in the prophylaxis and treatment of lip cancer and in the cosmetic correction of certain congenital, neoplastic, and traumatic lip deformities.

REFERENCE