PLASTIC SURGERY IN DERMATOLOGY

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The plastic surgeon forms part of the team that deals with the treatment of skin lesions. Out of every five patients referred to a skin clinic one requires some aid of surgery it may be either in the form of a minor biopsy of a suspected lesion or may mean a major skin excision with ultimate repair. It is the teamwork between a dermatologist, pathologist, surgeon and X-ray specialist and many others that lead to the good and complete treatment given in all hospitals today. There are certain lesions of the skin which are perplexing enough to the surgeon where a dermatologist can easily guide in the diagnosis and together the plan of treatment could be chalked out.

The skin is the largest organ in the body, very vascular and richly supplied with nerves. It is also most prone to wear and tear and how well it stands up to repeated trauma from within and without. Any internal disease is reflected on the skin and is a useful guide to the physician.

Principles in Surgery: When one cuts one leaves a scar. This is very important to impress on the patient. The magnitude of the scar depends on many factors. It is as difficult to remove a minor blemish on a beautiful face as it is to build up a face half destroyed by cancer or cancrum oris. All dermatologists should be able to do certain procedures either in the office or in a hospital. I prefer the hospital facilities, even for a small operation as the final result is definitely better with perfect asepsis and good assistants. Certain standard principles are to be followed in every operation which are as follows:

1. Incisions should be made along the lines of election of scars which may not agree with Langer's lines. It is best to use the wrinkle creases.
2. Haemostasis must be perfect before closure, mass ligation be avoided, wounds should not be closed under tension and part must be rested for good healing.
3. Layer to layer closure produces better healing, skin should not be stitched in inverted position, sutures should not be very tight.
4. Speed in surgery means not doing the same thing twice.
5. Use face skin for face, avoid free grafts on the face in dark people, it may show as a patch.
6. Remove stitches early to avoid stitch marks, use tension releiving dressing if necessary.

The surgeon may be called upon to remove a certain skin lesion or substitute or adjust certain tissues to their natural position. Excisional surgery may require any of the following procedures according to the particular situation.

* Paper read at IV All India Conference of Dermatologists and Venereologists, Bombay.

(1) Simplest is excision and suture. (2) Staged excision of Morestin. (3) Excision and covering the defect by local flaps or distant flaps or pre prepared tube pedicles. (4) Excision followed by free grafting of split or full thickness skin grafts. Each method has its own advantages—"there are many ways to skin a cat", yet the simplest and quickest is the best.

We shall now deal with some of the congenital and acquired skin lesions of interest both to the dermatologist and the plastic surgeon.

I. Congenital: Nevi are both of vascular and nonvascular type. These usually vary from a tiny mole on the face to a giant cavernous haemangioma and they all come for removal. They are either superficial or deep and some are vascular and hairy. Haemangiomas in young infants tend to increase in size for some years and then regress by themselves. Hence conservative methods should be adopted as far as possible. Besides the usual methods of excisional surgery mentioned above, injection of selerosing substances are worth a trial. I have tried boiling water, sodium morrhuate and 50% glucose with equivocal results, there is danger of superficial injection producing necrosis of the top layers. Ulceration of a haemangioma is difficult to heal and excision with grafting may have to be done. I have no experience with electrocauterization inside the haemangioma. During operation infiltration of saline or novocain with adrenalin makes the operation a simple procedure. All nevi removed by surgery should be examined pathologically especially if there is a history of increased vascularity and pigmentation crusting and ulceration with bleeding and with any palpable increase in the bulk of the lesion. All nevi should be excised with sufficient normal tissue all round.

II. Acquired conditions—Traumatic: (a) Facial injuries—Acute injuries on the face from car accidents, human and dog bites come to the plastic surgeon for repair. It is advisable to do an early repair, adequate wound toilet should be followed by excision of all nonviable tissue and closure without dead space or tension. All tissues must be placed in their normal original position.

(b) *Tattoo marks*: Tattooing with dirt particles is seen in road accidents, At the time of emergency surgery thorough wound irrigation and scraping removes the majority but if seen after a few months dermoabrasion on the superficial skin layers will improve this condition. If they are deeply embedded the part has to be excised. Tattoo marks made by commercial tattoolst extend deeply in the cutaneous tissue. There removal is often demanded. Repeated dermoabrasions or excision and suture or split grafting are the methods of choice as the occasion demands.

(c) *Keloids and hypertrophied scars*: Keloids may occur spontaneously in certain individuals without any history of trauma. They are usually found in the presternal region, around the shoulder and on the external ear. Keloids grow progressively, itch terribly and indurate the surrounding tissue in contrast to

hypertrophied scars. Keloids are difficult to cure inspite of all treatment including surgery, X-ray therapy, cortisone locally and systemically. Intrakeloidal excision and skin grafting is helpful as its marginal spread does not occur with this method. Intracutaneous injection of dexa-methasone has helped in several cases to make the keloid softer and less itchy. Hypertrophied scars following injury and burns form where part heals by granulation. The scars soften with time. Sometimes they need removal and replacement with good splitgrafts from the thighs.

(d) *Skin Infections*:

(a) *Acute*: Acute infection in a sebacious cyst on the face needs surgical evacuation of pus.

(b) *Chronic*: Amongst the common chronic infections the plastic surgeon has to deal with are—(1) Hidradenitis suppurativa. (ii) Tropical sores. (iii) Scars of old acne vulgaris and smallpox. (iv) Skin lesions in cancrum oris. (v) Filariasis.

(i) *Hidradenitis* usually affects the skin of the axilla with a persistant infection of the sweat glands. Cure is obtained by complete excision of the affected area and replacement by a splitgraft or by transposing healthy skin from the back of chest with split graft on the donor area. The second method avoids any contraction of the graft in the axilla. Two such cases have been operated with excellent resuits.

(ii) *Oriental Sores*: Commonly seen in persons staying in North India. Over 100 cases of such sores have been treated by plastic surgery. Sore may be single but is usually multiple on the face. Some are very superficial whilst others are so deep that muscle and subcutaneous tissue have been destroyed. Each case requires detailed study of the scar and its location. Treatment varies from dermo-abrasion of the superficial ones, excision and restoration with or without grafting in the intermediate ones whilst in the deep ones filling material using dermofat-fascia graft may be necessary.

Sores mar the inner canthus of the eyes and on the nose pose a special problem of reconstruction. Free grafts on the face are avoided as far as possible.

(iii) *Scars of smallpox and acne*: Over 200 cases of smallpox and acne scars have been treated so far. Smallpox is endemic in this country. Dermoabrasion with steelburrs, sand-paper ($3\frac{1}{2}$ size) on rollers and special rough steel rollers have all been used. Patient is given general anaesthesia, cheeks ballooned with gauze packs, and whole face dermoabraded and vaseline gauze applied. Skin is not chilled with ethylchloride. Face lifting from the preauricular region in females and from the front in males is done if the skin is very lax and patient over 30 years. Repeated sittings are given any time after 6 weeks interval. Dermoabrasion should be such as not to produce Keloidal scars. Return back of normal skin colour varies from person to person, it returns sooner in the lighter coloured patients. Cosmetics are allowed once the gauze has dropped off on the tenth day

after operation. Improvement does occur after each sitting, appreciable improvement is only noticed after about 3 sittings. The superficial marks having faded, the deep marks involving total skin loss are imposible to cure by this method–excision and suture or elevation of the scars with filler fat graft should be the answer to these.

(iv) *Cancrum oris*: Extensive loss of cheek tissue is common after an attack of cancrum oris. Some cases end up with extensive fibrosis and trismus. It is necessary to study the amount of tissue loss and plan the operation to restore it. Scar tissue should be removed and trismus relieved. Adequate lining and covering flaps have to be brought in to fill the defect.

(c) *New Growths*: Solid and cystic lesions occurring on the body are often referred to the plastic surgeon for simple excision. Lipomata and neurofibromas have no difficulty in diagnosis except in the treatment of the later the skin is incorporated in them and needs excision.

Malignant: The three commonest malignant skin tumours are carcinoma, rodent ulcers and melanocarcinoma. Carcinoma is common on the face, but could occur on the genitals and extremities. It is common at the mucocutaneous junctional areas. It forms a typical crusted hard ulcer with early lymphatic enlargement.

Basal cell carcinoma occurs usually on the face, slowly growing and with tendency to burrow deep, lymphatic involvement is rare.

Melanocarcinoma starts usually from a pigmented or nonpigmented mole. Constant irritation is a predisposing factor. It may develop from a mole. There is sudden increase in size, change of colour, crusting and bleeding with ulceration, hard nodules and adenopathy. It is highly malignant and multiple metastases are common.

Leucoderma-Surgery is only indicated in stationary leucoderma of long standing when the area is not very extensive and on the exposed part of the body; no guarantee can be given that the graft or even the donor area may not become leucodermic. Tattooing of leucoderma patches is reported to be unsatisfactory and the author has not tried this method.

CONCLUSIONS

In this article is reviewed the scope of the plastic surgeon in the vast field of dermatology. The ultimate aim is to cure the patient of any skin lesion and it is not important whether a dermatologist trained in the field of surgery does the job or the plastic surgeon handles the case. The different types of conditions and their treatment is described.

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Statement about ownership and other particulars about newspaper INDIAN JOURNAL OF DERMATOLOGY AND VENEREOLOGY to be published in the first issue every year after last day of February.

FORM IV

(See Rule 8)

1.	Place of publication : ...	C/o. Dr. T. K. Mehta, Shah & Parikh Mansion, Queen's Road, Bombay 4.
2.	Periodicity of its publication :	Quarterly (Last date of each quarter)
3.	Printer's Name:	Shri. A. R. Alevoor
	Nationality : ...	Indian
	Address :	1, Shantineketan, Daftari Cross Road, Malad (East), Bombay 64.
4.	Publisher's Name : ...	Shri. A. R. Alevoor
	Nationality : ...	Indian
	Address :	1, Shantineketan, Daftari Cross Road, Malad (East) Bombay 64.
5.	Editor's Name :	Dr. T. K. Mehta
	Nationality : ...	Indian
	Address :	Shah & Parikh Mansion, Queen's Road, Bombay 4.
6.	Names and addresses of individuals who own the newspaper and partners or shareholders holding more than one per cent of the total capital.	Indian Association of Dermatologists and Venereologists

I, A. R. Alevoor, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd. A. R Alevoor

Date : 31st March, 1963. *Signature of Publisher*