

The Role of Plastic Surgery in Modern India

By

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Definition

What is Plastic Surgery ? It is a specialised branch of surgery which deals with the treatment of deformities of the face and other regions, notably the hand. The dictionary meaning for Plastic is "to form or mould." Plastic surgery therefore deals with the restoration of "form" or "appearance". Closely integrated with the restoration of form, is the return of function.

Take for example, the case of this man who was a victim of cancerum oris, and lost his lower lip in early childhood. By reconstructing the lowerlip we have achieved a two-fold objective :

1. Restoration of appearance, and
2. Improvement in the function of the mouth. See Figs. 1-4.

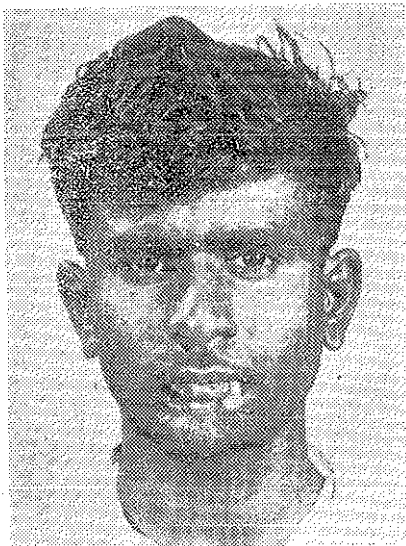


Fig. 1
Loss of lower lip following cancerum oris in childhood



Fig. 2
Pre-operative - close-up view of mouth

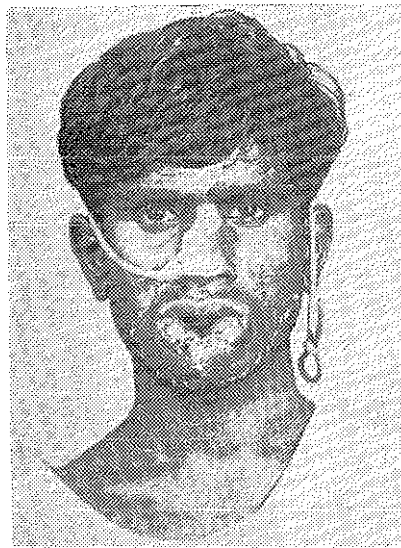


Fig. 3
1st stage reconstruction of lip using local flaps.



Fig. 4
2nd stage - Readjustment of tissues to restore lower lip

There is a popular belief, that this branch of surgery is much too sophisticated for our country, and that it involves face lifts, rhinoplastics and other beautifying operations. Cosmetic surgery admittedly forms a part, but only a small part, of the entire specialty.

We in India, have a unique heritage in that the first record of Plastic Surgery is in the writings of that great Indian surgeon SUSRUTA (800 B.C.)

Transplantation

Science has made such giant strides, that transplantation of organs have become a reality. The recent dramatic success in cardiac transplantation attests to this.

The most usual form of transplantation practised in plastic surgery, is that of skin grafting. In skin grafting, scars or other blemi-

shes can be removed, and the area resurfaced by a free piece of skin taken from another part of the body. The transplanted skin then acquires a fresh blood supply and lives in its new surroundings.

Similarly, a piece of *fascia* can be transferred to the face, to correct the deformity caused by facial paralysis. Ears can be created out of *cartilage* pieces that are carved meticulously and then implanted. *Bone* can be transferred to the jaw, to restore a missing segment. The possibilities are endless. The principle utilised in such transplantation is however the same. Living material taken from one site and transferred to another, acquires a new blood supply and becomes a part of the body in its transplanted site.

In contrast, various alloplastic (inert) materials can also be used. The newest of these is a silicone compound called *silastic*. This material is nonreactive, and has gained a tremendous popularity in Western countries. It has now become available in India. The liquid form can be injected into any site where a restoration of contour is desired. The solid implant can be used to build up missing ears, saddle noses, small breasts, etc. The only drawback lies in the fact that it is non-reactive. The implant therefore lies inertly in its lodged site and any future trauma to the region can very readily cause a rejection.

In the long run therefore, living tissues are always preferable to inert replacements.

Burns

The treatment of burns both in the acute and in the late stages forms a large part of plastic surgery. The acute care of burns is very exacting. Skin grafts are performed 3 weeks post burn to minimise the morbidity and mortality associated with large raw areas. It is however, possible to heal these wounds with dressings alone, but the scarring that results can lead to disastrous contractures. A contracture results from loss of skin and the only correction feasible is that of a release followed by skin grafting. The following is an illustrative example. See Fig. 5-8.



Fig. 5
Burn contracture - severe involvement of neck and other major joints

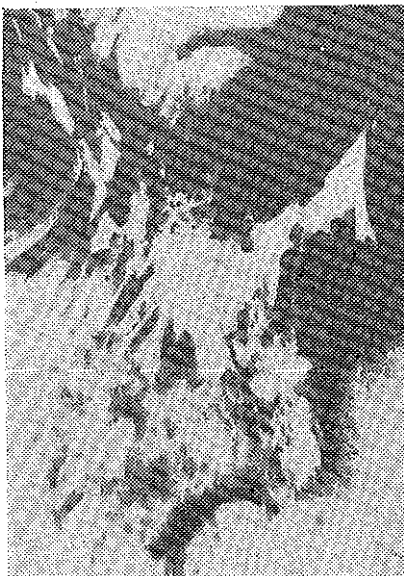


Fig. 6
Close-up of view of scarred neck



Fig. 7
After release and skin grafting-front view



Fig. 8
Post-operative - side view of neck

Scars: "Once a scar, always a scar". This is an oft repeated statement that is well worth remembering. Bad scars can be made *less noticeable* by plastic surgery, but to state that a scar will "vanish" or "go away" after surgery, is incorrect and such statements should be frowned upon.

A keloid, is a peculiar condition, where there is excessive scar formation for no apparent reason. Judicious surgery combined with post-operative radiotherapy can afford considerable relief to sufferers. A new cortisone called **TRIAMCINOLONE**, is the current favourite. Four injections given into the keloid at 3 weekly intervals, cause a regression of the lesion in 90 per cent. of cases.

It is however, very difficult to inject the drug into the keloid. To obviate this difficulty, a new type of pressure syringe has been developed. This expels the drug at high speed as a fine spray. The spray penetrates the skin painlessly, and lodges in the keloid. This method of treatment is rapidly gaining in popularity.

Cleft Lips and Palates

One out of 600 live births is afflicted with this common congenital anomaly. We repair cleft lips at 3 months of age. Palates are repaired at 18 months of age. The

palate is bigger and therefore easier to repair at that age. The child usually does not begin to talk before the 2nd year and our aim is to achieve a restoration of the speech mechanism before this. See Figs. 9 and 10.



Fig. 9
CLEFT LIP - Pre-operative



Fig. 10
CLEFT LIP - Post-operative

Rhinoplasty

A large humped nose can be re-shaped in the operation called reduction rhinoplasty. In this procedure, the nose is reduced in its height, width and length and the

alteration to the appearance is very striking.

The deformities of the nose in leprosy are varied. The following is a case which suffered a severe loss of skin from the dorsum of the nose. Restoration of this was effected through the medium of a forehead flap. See Figs. 11-14.



Fig. 11
Foreshortening of nose in Hansen's disease

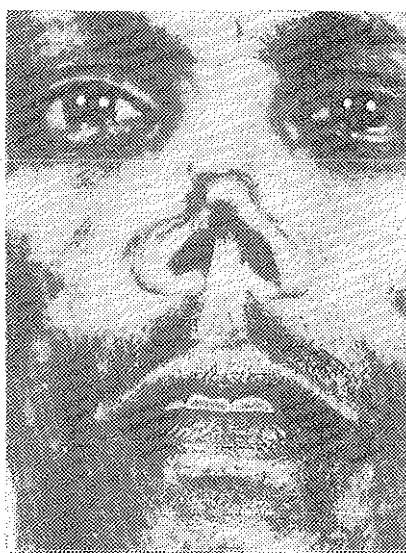


Fig. 12
Pre-operative-front view



Fig. 13
Forehead flap in position



Fig. 14
Return of pedicle to forehead

Filarial Infections

These parasites attack many portions of the human anatomy and the residue of the disease is most gruesome to behold. Elephantiasis of the leg causes a great deal of suffering by virtue of the weight increase of the affected limb, as well as its increased susceptibility to infections. Excision of the water-logged tissues and skin grafting,

helps to restore the contour of the limb, and normal ambulation becomes possible once again. See Figs. 15 and 16.

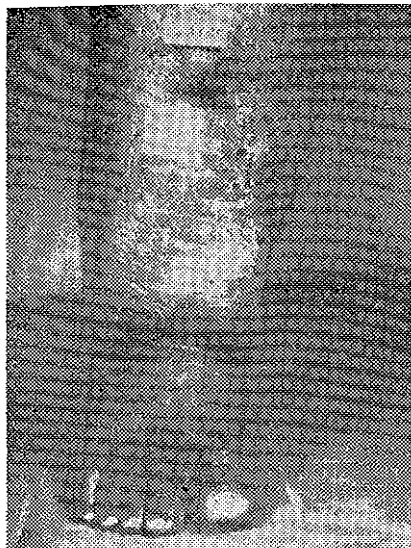


Fig. 15
Filarial leg—Pre-operative

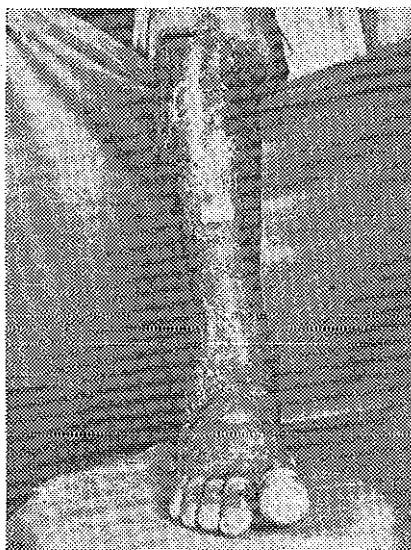


Fig. 16
Filarial leg—after 2 stage reduction and skin grafting

Cancrum Oris

This dire disease afflicts mal-nourished children who suffer from debilitating illnesses. A symbiotic infection in the mouth causes a loss of bone and overlying skin. The trismus that results is extremely disabling. Several procedures have to be performed before the patients' face can be restored to a semblance of normality. An illustrative case

is cited below : See Figs. 17-19.

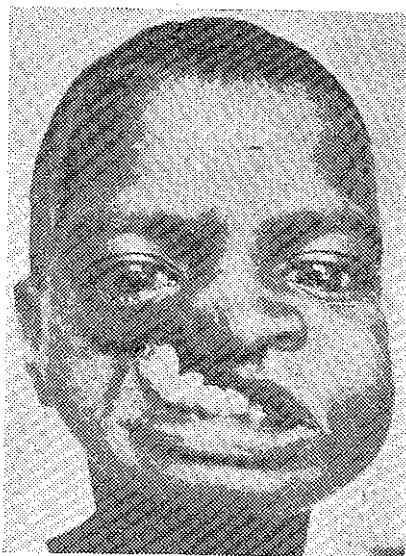


Fig. 17
Cancrum oris—Loss of cheek and maxilla 5 years ago

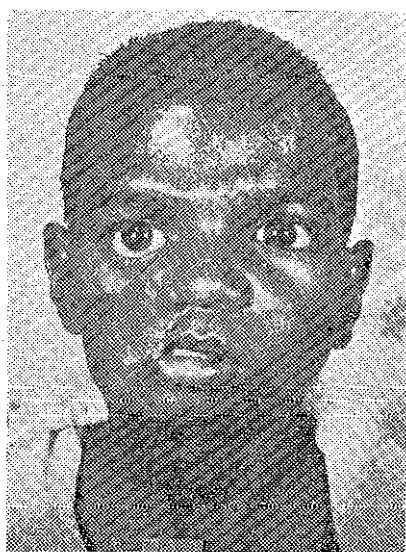


Fig. 18
After reconstruction of cheek and release of jaw using fore-head and neck flaps—mouth closed

The care of deformities of the upper-limb, genital anomalies, facial bone fractures and many more defects of other regions be they congenital, traumatic, inflammatory or neoplastic in origin, come within the purview of this specialty. The detailed listing of all the procedures practised and possible is outside the scope of this article.

Conclusion

Plastic surgery is a dynamic

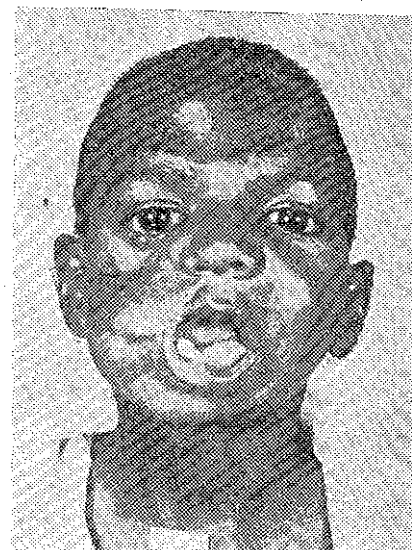


Fig. 19
Post-operative—mouth—open

specialty and more and more of the lay public are becoming aware of its vast scope. Knowledge of this subject is being disseminated from several training centres scattered throughout our country. It is only a question of time before the entire gamut of corrections and restorations possible becomes common knowledge.

(An article on Nurses Role in Plastic Surgery by the same author will appear in the next issue. —Ed.)

Population and Nutrition in the Year 2000—Contd.

Clearly, in 1968 at least, there can be no world-wide solution.

We must hope that advances in scientific knowledge will ease the pressures which soaring birth-rates are already now creating in some of the developing countries. The year 2000 is likely to be difficult, the more so since the population explosion is linked with an inexorable process of urbanization which, in spite of its many unpleasant aspects, will probably affect at least two-thirds of mankind. There seems little doubt that in the sphere of health, too, we will encounter setbacks, perhaps even some defeats. All the more reason for us to throw all our skill and knowledge into the advancement of science, in the hope that it will help us to win this peculiar race against time.