Small Pox Marks Face

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Small pox as being prevalent in our country, it leaves many disfigured faces as a result of its after effects. Though present all over the face, but these marks are more marked over the nose and the adjascent area. Lids are usually spared but sometimes also involved. The depths of the scar varies according to the severity of the disease. The present study of small pox marks face has been conducted on 57 cases, collected from the Unit of Plastic surgery, Department of Surgery, Gandhi Memorial & Associated Hospitals, Lucknow from January 1959 till December 1968. Twenty two of these were private patients.

The analysis revealed that out of the 57 cases, nineteen were males and thirty eight were females. The range in the age group of 11-20 years included 19, 21-30 years 37 and above 30 years 1 case. Females being more conscious for cosmetic aspects, their numbers of presentation for the operation was higher as compared to the males. Similar observations were also made by Manchanda et al (1967). The associated deformities of the lid, lip and nose were also present in few cases. Their distribution was as follows :—

1. Small pox marks face with no other associated deformities. 51 cases
2. Involvement of lids : 1 patient had ectropion right lower lid. This patient was 4 times operated out side but was not relieved. Ectropion correction and partial thickness skin grafting was done with fair results.
3. Involvement of lips: 2 Cases. One of these had contracture of the upper lip. Excision of fibrous tissue and full thickness post-auricular skin graft was done. The graft sloughed at places which was replaced by split thickness skin graft with fair result. In the other, contracture of angles of the mouth was present. Widening of angles and suturing was done with excellent results.
4. Involvement of Nose: 2 Cases. One of these had deformity of the tip and alae of the nose. Excision of scar tissue and arm flap nose reconstruction was done with excellent result. In the other atresia of the nostrils was present. Widening and skin grafting was done with fair result.
6. One had Involvement of ear lobule that too was dermabraded with good result.

Management of Small Pox Marks Face

The management of small pox scar face is essential both from social as we

as psychological point of view. In young girls, it is a handicap in the field of matrimony. Such patients are being treated by us for the last 15 years. These cases are subjected to dermabrasion by sand paper of 2M size mainly.

We have tried all kinds of brushes including the diamond burs: but it is our experience that the wire brushes produce more scratches and carborendum is not so easily available. Bigger brushes have the disadvantage that they cannot fit in the region of the root of the nose, its tip and adjacent angles with the cheek. Diamond brushes throgh small but they are not suitable for small pox marks and their utility is limited to wrinkles whenever required while doing face lift procedures. We do not feel safe with high velocity brushes particularly when the whole of the face is to be dermabraded and these vibrations may in itself affect the quality of healing. Hence we mainly rely on sand paper that has consistently given good results in our hands. Haemostasis is attained by pressure and the whole face is thoroughly washed with cold saline. Previously we used to keep the face exposed but now we are bandaging them with vaseline gauze and wet cotton. This is done in order to prevent oedema and crust formation thus leading to early recovery. The pressure is relieved after 48 hours.

Post-operative Management :

The patient is kept well covered in mosquito net and fed by straws. Infection is prevented by taking care that nothing falls over the face. Patient is put on broad spectrum antibiotics, avilt ablets B-complex and Vit. C. With sprinkling of Penicillin powder. Crust usually forms in a week's time and starts pealing near about the tenth day; which is complete within

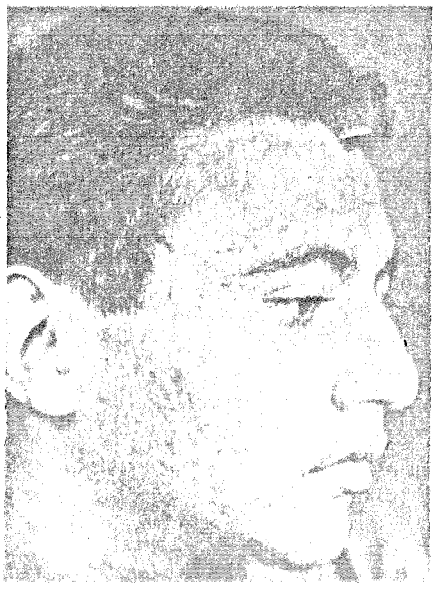


FIG. 1 a. Pre-operative photograph

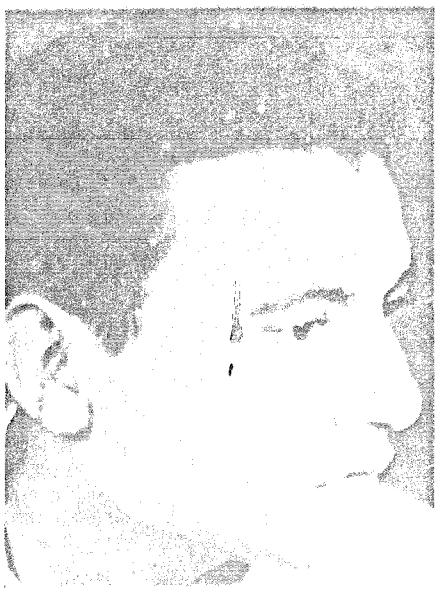


FIG. 1 b. Post-operative appearance

the 2nd and 3rd week leaving smooth pinkish skin. These patients were given following instructions :

1. Avoid direct sunlight for 6 months.
2. Apply cold cream twice a day.
3. Gentle use of soft muslin for drying the face.
4. In males, shaving can be done after 2 weeks.
5. Redoxon 1000 mg daily is usually given for 6 weeks in order to improve the epithelialization and the texture of the skin and to inhibit melanin formation as well.
6. Savlon lotion is advised for cleaning of the face and soap is avoided for a few months.

Maneksha advocated the use of closed dressings by covering the raw surface by non sticking furacin gauze dressings covered with pressure pads. Removal of dressings was easier and convalascence was smoother in his series. The disadvantage of open method is considerable oedema over the face with a feeling of stretching and discomfort to the patient. Over the last two years we have adopted closed pressure dressing technique. A broad spectrum antibiotic cream was applied locally and the area covered with Tullegras over which wet cotton pads were applied and bandaged exerting a firm uniform pressure. The pressure was released after 48 hours and then the faces covered with Tullegras was left exposed from 5th day onwards. The Tullegras was cut gradully as it got detached from the healed surface. Complete healing occured in about 10-12 days. The basic advantage of the method was relative comfort, absence of a oedema and early convalascence. But we have certain reservations when we compared our results with those treated by open method that will be discussed later.

Previously we used to give prednisolone 5 mg thrice a day for 7 days to these patients in order to supress the melanocyte stimulating hormone. Where prednisolone was not used these cases did not show any appreciable difference from those in which it was used. Thus use of prednisolone has been abandoned for the last 2 years. Rose, M. Campbell quoted that small (1956) recommended the use of 4% Benoquin lotion locally for the same purposes, but we have no experience of this.

Follow up results and discussion :

Out of these fifty seven cases, fifty two were operated and five were given follow up. One of these needed split skin grafting for the hypertrophic patch over the angles of the mouth which resulted due to previous scarring that was dermabraded. Some of them did not turn up and it is presumed that they are doing well. The results have been good and pleasing in all except in two patients who developed hypertrophic scar at one or two places over the face that gradually improved with time. One patient had allergic rashes that were controlled by antiallergic treatment. 10% of them developed moderate to severe hyperpigmentation over the face which improved in due course of time. Marked appreciable improvement is seen within

six months. Milia has been reported as a complication of Dermabrasion, but we can hardly recollect any patient in our series that had this complication in any severe form. These are small cysts which arise from the epithelial cells of the hair follicles, sebaceous glands, sweat ducts, which are cut at the time of dermabrasion. They become isolated but continued to function in the dermis. Milia appear within a month of operation but can be demonstrated even upto 5—6 months after dermabrasion. Most of these clear spontaneously. Occasionally incision and expression of the contents by pressure may be required. We have no experience of this procedure because we never encountered such a severe case.

Having reviewed 57 cases in retrospect, we can say that it is not possible to predict exactly the results of this procedure. The factors mainly responsible for influencing the results are :

1. The type and depth of marks.
2. The colour and complexion of the patient.
3. Unknown factors, such as their pigmentary reactions on the abraded surface.

1. Type & depth of the marks :— According to the type and depth of marks these patients can be divided into the following groups :—

a. Where marks are isolated with intervening areas of healthy skin and depth upto the dermis only. These give by far the best results (Fig. 2).

b. Those in whom, the spots have coalesced with each other, but are only of epidermal depth. They

Fig. 2 (a) Showing Pre-operative Isolated marks

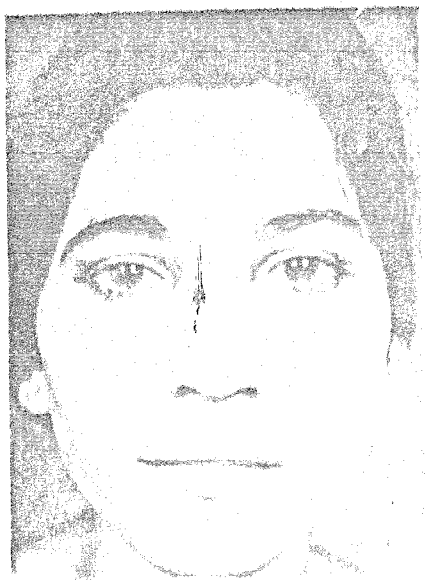


Fig. 2 (b) Showing immediate Post-operative result

for give fair results (Fig. 3).

c. Honey comb type of face in whom the intervening area of healthy skin are sparse or scanty :- Although there is improvement with dermabrasion but the surface cannot be expected to be smooth. In such patients on close examination there may be evidence of linear scars inside the coalesced marks or spots. Such scars do tend to improve by dermabrasion (Fig 4).

Fig. 3—(a) Shows Pre-operative coalesced marks

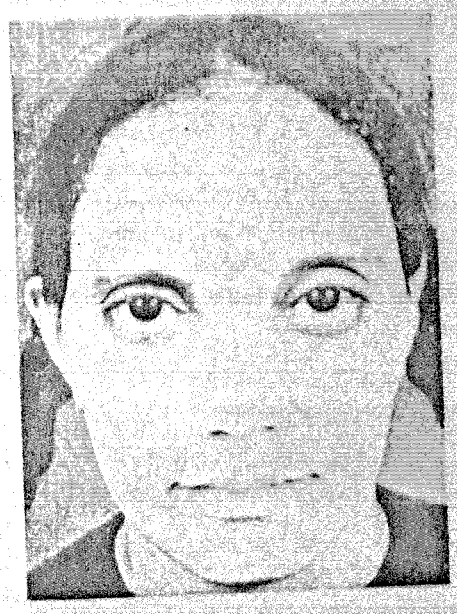


Fig. 3—(b) Shows Post-operative result

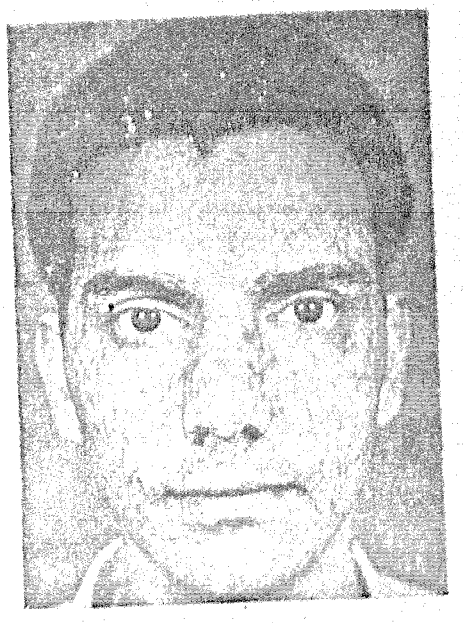


Fig. 4—(a)

Shows Post-operative result

Fig. 4—(b)

d. Yet in another variety there may be large patches of scarring without any intervening healthy skin with pactically loss of most of the dermis in that patch. Such large pratches are commonly associated with the honeycomb variety or the second type of patients where the spots coalesce. Big patches of thin or papery scars donot improve by dermabasion, because of loss of texture and they are better treated by supergrafting after dermabrasion (Fig. 5, 6, 7) or full thickness grafting after excision. In order to obtain good colour match, the donor site of election for the graft is either from post-auricular or supraclavicular region. Margins of such patches may be lightly dermabraded after grafting so as to make them uniformly even. Sometimes scapular region may be the only choice to avoid scar in the supraclavicular region.

2. The colour and complexion of the patients :— People with fair and white complexion give by far the best results and in them improvement will occur even in the later two varieties. In the immediate post-operative period, the colour may become darker and patchy, but it tends to come to normal within 3-6 months. In our country the range in complexions and shades in colour varies so much that slightest variation may not give the same results as expected. However, one can include in this group, people of wheatish complexion. Although darker people also improve, but

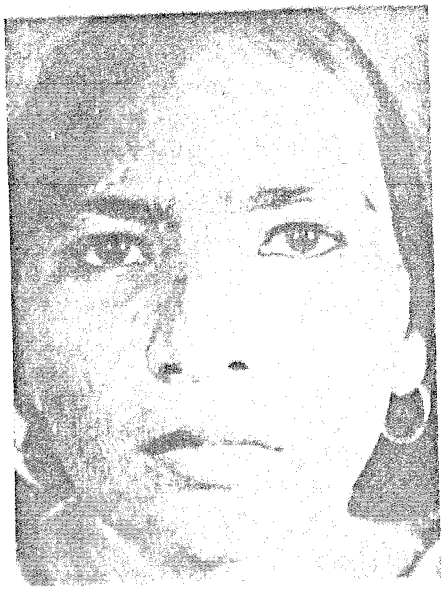


Fig. 5 (a) Shows Pre-operative Photograph with a papery scarred area on the temple extending to the upper eyelid.

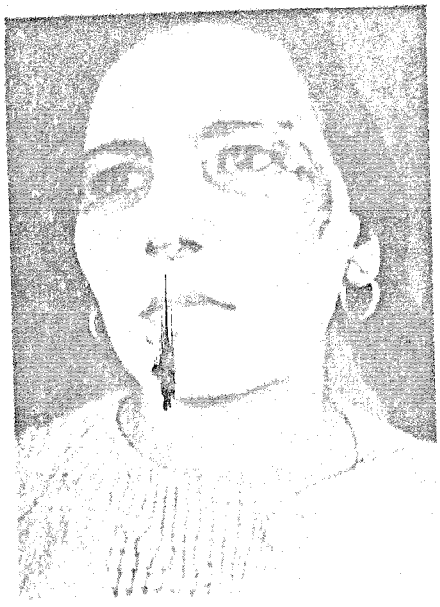
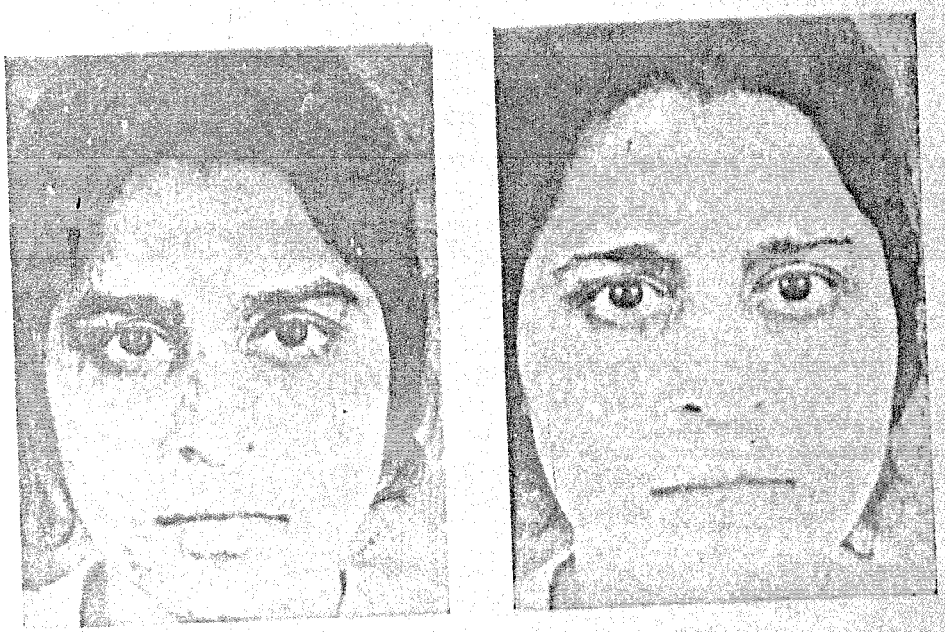


Fig. 5 (b) An immediate post-operative result showing dermabraded area and supergraft from the scapular region.

(a) (b)

Fig. 6



(a) (b)

Fig. 7

in more pigmented patients, one has to be cautious about the depth of abrasion in one sitting, because it is in these subjects that few hypertrophic scars with keloidal tendency may develop. They tend to subside within a year or two and surgical excision should be withheld in view of the tendency of regression.

3. Unknown Factors :— Excessive dark pigmentation in the immediate post-operative period is something which is unpredictable (Fig. 8.) but with reassurance and with the passage of time it disappears. Two of our patients managed with closed dressings developed intractable hyperpigmentation. One of these had foolishly over exposed himself direct to the sun's rays. But when we analysed our series of 14 patients treated with closed dressing we found that from the initial stages the healed areas are not as red and pink as we got in exfoliation of the crust that forms in the exposure technique. The hydrocarbon in the vaseline of Tulle gras may be responsible for irritation and hyperpigmentation. This we can only confirm if we now apply gauze with sterile bland lanoline. This we have started now. Local application of 4% Benoquin lotion was advised in these two but we cannot offer any comments on its regular usage.

Hyper-irritability of skin and vesicle formation is again a unpredicable phenomenon which may become troublesome even with the complication of acute inflammatory reaction, but this usally subsides with parental administration of Cortisone, and antihistaminic therapy.

Small spots like acne may sometimes be due to embeding of foreign body but

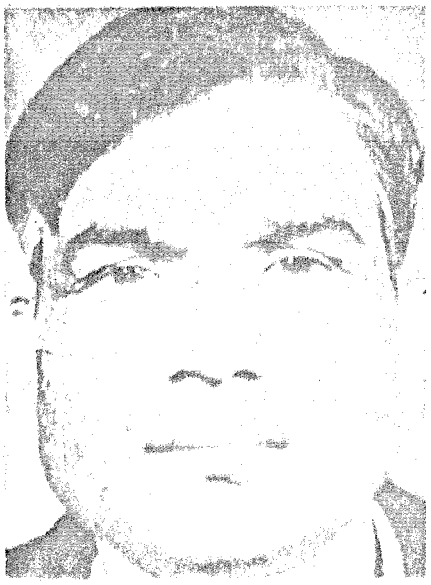


Fig. 8 (a) Shows Pre-operative photograph

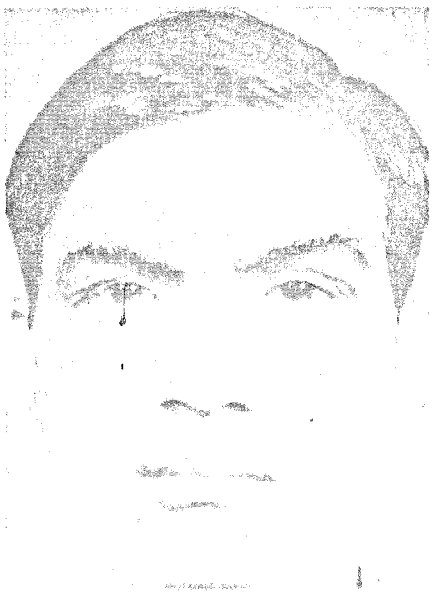


Fig. 8 (b) A typical example of patchy hyperpigmentation which persisted nearly one year and the patient requested second dermabrasion at his own risks. Because he did not observe the instructions to protect his face from direct exposure to sunlight.

they are not very troublesome, because rubbing these with antibiotics like acromycin with cortisone or Betnavate 'N' ointment usually clears them completely.

Summary

An analysis of 57 cases collected between January 1959 to December 1968 at the Unit of Plastic Surgery, King George's Medical College, Lucknow, India is presented. The description of the various parts affected, technique and post-operative management is outlined. A brief discussion and follow up has been described.

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