

**Needle dermabrasion**

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**Abstract**

We are describing a technique of needle dermabrasion (tattoo without pigment), in order to improve achromic, hypertrophic and sighty scars. It is simple, it is safe (no complications) and it gives us consistently good results.

**Key Words:** Needle dermabrasion, microdermabrasion, hypertrophic scars, achromic scars, hypochromic scars, tattoo and tattoo without pigment

**Introduction**

In two (2) face lift patients, we had hypochromic scars. One patient had a necrosis of the cheek and the other had an infection of the temporal incision. In both cases, the ugly hypochromic scar were tattooed with pink, brown and beige pigments that gave us a very unnatural looking orange-pinkish color of the skin. Fortunately, one or two year after surgery, these patients came back and the pigment had disappeared, but to our stupefaction, we noticed that the scar was immensely improved in texture, appearance and color. The artificial pigment was completely gone and replaced with melanin. This gave us the idea that the puncturing or trepanation of the scar was responsible for the great improvement and repigmentation of the scar. From this idea, we began tattooing without pigment hypochromic scars following face lifts, with improvement of the scar and improvement of the pigment. We then did it on abdominal scars and breast scars. In one American Plastic Surgery Meeting, a Scandinavian was looking for me to make me aware that in one of his Negro patient in whom he had done a breast lift, the achromic scars were considerably improved by simply puncturing the scar with needles. The technique had been described at the Xth Congress of the International Confederation for Plastic and Reconstructive Surgery in Madrid, Spain in June 1992 and at the XIIth Congress of the International Society of Aesthetic Plastic Surgery in Paris, France in September 1993.

Fig. 1. (A) Achronic scar of the cheek. (B) The same cheek tatoood one year earlier. Since the artificial pigment vanished and is replaced with melanin the quality of the scar is remarkably improved

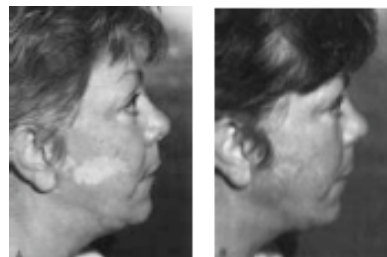
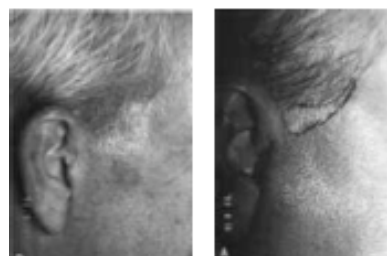


Fig. 2. (A) Achronic scar of the cheek. (B) The same cheek tatoood one year earlier. Since the artificial pigment vanished and is replaced with melanin the quality of the scar is remarkably improved



Fig. 4. (A) Achromatic facelift scar before being needle tattooed. (B) Achromic facelift scar 2 weeks after needle dermabrasion.



### Discussion

We had to come to the conclusion, that the puncturing of the needles had something to do with breaking down the collagen, realigning\* it and it had also something to do with bringing back melanin into the scars. As we perform this tattoo without a pigment, we can see that a hardened scar is softened as if we had performed a multitude of W plasties and we have noticed that in some cases, a new vascularization was provoked, decreasing the trap door effect of some of our scars. The elevated and slightly hypertrophic scars were flatened without recurrences. The scars were much softer, mobile, stretchable and less evident. We also noticed that some of our scars that were achromic, began to repigment. We believe, this was possibly from transferring melanocytes from the surrounding, into the achromic area, but it can also be from stimulating dormant melanocytes, or those from the surrounding hair follicles. We can think of a nevus which is resected completely, according to the pathologist, and a few weeks later, we can notice a recurrence. This is simply because the scalpel has stimulated the melanocytes and we have an excess production of melanin in this area. If we look in the French Literature, some dermatologist would treat vitiligo of the scalp or in hairy area by simply puncturing the vitiliginous skin in order to repigment it in these areas.

\* it realigns the collagen in a physiological way because of the absence of contamination of gross trauma, of tension or ischemia.

### Technique

Most of our patients prefer to have local anesthesia (which must be done superficially because of the underlying scar) and what we do is we use a commercial apparatus for tattooing. We use 9 or 12 needles and at high speed, we perforate the wound until it bleeds. The needles must penetrate the epidermis and part of the dermis. We can feel spontaneously a softening and stretching of the scar. By puncturing with needles, we leave some islands of intact tissue that will assure the regeneration of our tissues. Satisfied with the result, we clean with hydrogen peroxide and then apply opsite which will fall off after a week. Generally speaking the crust comes off with the opsite and we have a slightly erythematous scar for a few days. In some cases, we repeat every 2 to 8 weeks and by repeating this procedure, we always obtain some improvement of our scars. In a large number of them we do have some repigmentation. We have also noticed some hair growth in some areas. Patients return to their normal activities the same day and are told to avoid sunshine for 3 months or use a sunscreen .

Fig.4.

(A) Hypertrophied scar of the cheek.  
(B) After needle dermabrasion of the hypertrophied scar of the cheek.

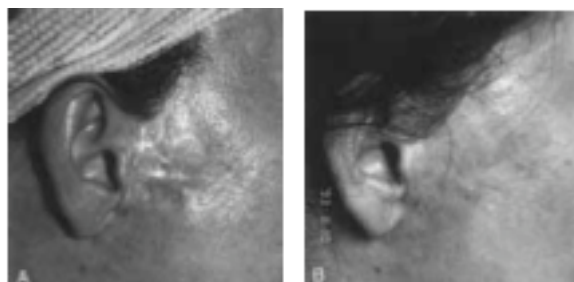
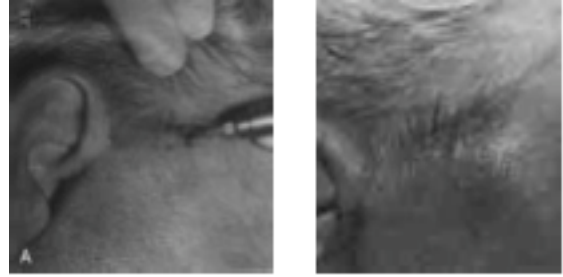


Fig. 5.

(A) Breast augmentation scar seen following chronic purulent discharge had healed.  
(B) Two months after needle dermabrasion. (C) Six months after needle dermabrasion.



Fig. 6. (A) Achromatic facelift scar before being needle tattooed. (B) Achromic facelift scar immediately after needle dermabrasion.



One patient had a breast augmentation with a Mème implant which was removed because of an infection. However, some of the polyurethane remained into the wound and we had a chronic sinus with a non-healing sero-purulent discharge. The patient was reoperated to remove any polyurethane left. The wound stopped discharging but we had a terrible scar. We did perform a needle dermabrasion (or tattoo without a pigment) and we have obtained a tremendous improvement of the scar. Dermatologist, at the moment are projecting with velocity some organic crystals to accomplish somewhat what we are doing but cannot penetrate as deep as we do with our needle dermabrasion. They claim to have good results for hypertrophic and acne scars and call it microdermabrasion or Aluminium Oxide Crystal Microdermabrasion (AOCM).

### **Summary**

In a large number of our patients with achromic, hypertrophic or ugly looking scars, we have helped them considerably by doing a needle dermabrasion or a tattoo without pigment with satisfactory results. The quality of the scar was greatly improved. In some cases it repigments and we've even had some hair to grow into the scar. None of our patients sustained complications or undesirable effects.