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NOTE ON THE TREATMENT OF PORT-WINE MARK
BY ELECTROLYSIS.

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SOME of the members present will recall the discussion on the treatment of port-wine mark which occurred at the Third Annual Meeting of this Association at New York in Aug., 1879. On that occasion I claimed to have tried electrolysis in that deformity using a bundle of needles with great benefit. Others had either never employed it, or had been disappointed in its use.

In Piffard's *Materia Medica and Therapeutics of the Skin* (1881), the author records having treated two small wine marks with fairly good results by this method. He employed a Carroll's vaccinator. Later, in the *Archives of Medicine*, Dr. G. H. Fox called general attention to this mode of procedure. In the *St. Louis COURIER OF MEDICINE*, June, 1883, I made this statement: "I have not seen a case in which some degree of improvement has not been manifest, and in some port-wine marks of small extent the results have been brilliant."¹ Lastly, Dr. Fox in his illustrated work on *Diseases of the Skin* (1885) thus sums up his experience in this operation: "The electrolytic treatment of wine mark I have practised during the last five years, and, al-

1. This operation is not to be confounded with the similar one, that is by electrolysis, first proposed by me for the obliteration of enlarged vessels in rosacea and allied states. See *Arch of Dermatology*, Oct., 1879."



though I cannot claim that the operation accomplishes all that could be desired, I have repeatedly succeeded in transforming a dark and unsightly stain into a smooth patch of a light pink hue. The object aimed at in the treatment of wine-mark by electrolysis, as in the case of scarification and puncture, is to excite sufficient inflammation to destroy the fine net work of blood-vessels. As the galvanic current is more active, and at the same time more manageable than acid adhering to the points of needles; it is not strange that this method should produce the desired effect in the speediest manner and with the least injury to the surface of the skin." So far as I know the references and quotations above constitute the literature of the subject.

Now at the end of six years of experience in the electrolytic treatment, I think I may be justified in laying before you the results of my observations.

The *modus operandi* is, of course, well understood, and consists in the use of a needle or needles, placed in a suitable holder, which latter is attached to the negative pole of a galvanic battery. The successive steps of the operation are the same as those that I have often described in connection with the removal of superfluous hairs. The most important point relating to any destructive operation upon the skin, is that the operator should control the destroying agent as much as possible. The facility with which this end is accomplished in electrolytic methods constitutes one of its chiefest merits. In order, therefore, that I may control this destruction in the most satisfactory way, I have for a long time discarded the bundle of needles, and make the electrolytic puncture with one only.

By the cautious and expert use of this one needle, I now no longer set up extensive areas of suppuration, as was apt to be the case with the crown of needles; and since employing the single needle I have no fear of the keloidal scars, which sometimes followed the introduction of the bundle. The operation is thereby rendered somewhat more tedious, but certainly safer. It is a tedious thing to do at best, for when the puncture is made the surrounding region becomes so blanched, that we are at something of a loss to know exactly where to make the next one to the best advantage, and the next day for quite a space around

the operated place there is an inflammatory areola, and perhaps crusting, which forces us to wait for a number of days before operating again. Then I have found that one cannot really form an estimate of the result in a given area until at least six weeks or two months afterward; and when I have gone over all the space that I intend working upon, I am in the habit of dismissing the patient for a season. No one pretends for a moment that in a port wine-mark of any magnitude this operation is going to leave a normal skin behind it. In the majority of cases we aim to produce minute multiform scars, which in time become white, and thus obliterate the nevus.

It often happens, however, that a large area is permanently blanched without scar by apparent obliteration of vessels at its periphery. In some cases I have observed that intense brown pigmentation takes the place of the red surface, which, however, gradually undergoes absorption, leaving the skin white. This generally occurs on parts where the the skin is thin. Where one needle is employed the resulting scars are usually thin, supple, non-depressed, in no case leaving behind elevated knots and cords such as I have seen result from galvano-cautery.

It is very important, as stated above, to allow periods of some weeks to intervene between the successive operations, so as to give ample opportunity to the skin for recuperation, and to enable one to see clearly the result. Even after a tolerably thorough first going over, it will be found that many pale spots and spaces have been established, and we then proceed to pick out the intervening red places.

Proceeding in this necessarily cautious and deliberate way, many months may be occupied in the labor before any adequate result has been obtained; yet I know that the benefit conferred by this operation has made life worth the living to a good many people.

Very often I think it is better, in a cosmetic way, to endeavor merely to lighten the color of the mark rather than to convert it into a dead white patch; of course, where the mark is quite small, a thin white, and even glistening, cicatrix is not especially objectionable. It is not uncommon to find that in an apparently obliterated wine-stain after a while dot-like te-

langiectases will appear here and there. They must be again destroyed.

I do not know that I can better illustrate the features of the operation than to present the notes of three cases that have been under my observation for some time past.

CASE I. This patient, a fair haired young lady, had a portwine stain of the left side of the face, taking in the brow, the upper eyelid, the left side of the nose, and the same side of the upper lip. She had been operated on by the various methods in vogue, namely, Squire's Sherwell's, and the electro-cautery. She reported the first two as being of no use in her case, or perhaps it would be better to say of no value as performed by the gentlemen she consulted. The electro-cautery operation had certainly been successful in the way of obliterating the stain in certain places, but the result was worse than the preceding deformity. On the forehead there resulted an elevated, radiating scar, which was exceedingly disfiguring. The patient told me, moreover, that an ugly suppurating wound had followed the operation, which was weeks in healing. I commenced operating with a single needle on the side of the nose, the upper lip, and an isolated silver dollar-sized patch upon the temple. Later on I attacked the forehead and upper eyelid.

Without going into the details of the tedious operations, which have run over a period of a year and a half, I shall speak merely of the effect so far produced. The patch on the lip is a great deal lighter, even in the places where the stain still persists, but in many places are to be seen small white scars. One place, near the ala of the nose, is perfectly blanched, although it was never operated upon. The discoloration on the nose is nearly gone, although here and there red dots are to be observed, sufficiently numerous, I must admit, to give this region still a pinkish hue although not at all as pronounced as the original color. The patch on the temple is absolutely obliterated, leaving in its place a white superficial scar. Over the forehead the red color has disappeared in many places, but in other parts a yellowish pigmentation has supervened which is gradually, but surely, being absorbed; I attacked the elevated cicatrix produced by the galvano-cautery, and, as I had observed before in other hy-

pertrophied scars, the effect has been striking as regards smoothing down the scar.

Taking it all in all, the condition of affairs in this case has been bettered at least fifty per cent, and I believe that I shall yet see this very much improved.

CASE II. This was a dark-skinned young man, who had a triangular mark extending, as regards its base, from one angle of the eye to the other, and running to an apex at the junction of the nose and lip. When he first came to me five years ago I made a little operation on a small outlying portion about the size of a dime. I then advised him to wait several months to see how matters would turn out. He did not return to me for eight months for further work, but he was induced to come back by the fact that the operation had been successful. From this time on he would come into the city about every six months and stay two months at a time. The result has been very gratifying. The patch is but little visible, whereas formerly the young man had a most forbidding aspect. I have noticed that even on the most completely worked over places now and then a little pin-head sized red spot will appear, which I again destroy. There has been nothing like an attempt at a general return, however; A letter which I have received from this patient will give a good idea of his estimate of the results, and in such cases, the patient is as well qualified to judge as any one else. Under date of July 25, 1885; he writes as follows: "Everybody agrees that the work so far has been a success. The lower part and on the nose is almost clear, but immediately under the eye, where it used to swell so, it is a little red yet, but not a dark red as at first. I am well satisfied that if the mark had been a little distance from the eye that it would have been gone by this time."

CASE III.—This was a red-haired young man, with a deep red stain on the right side of the nose. I worked on him for six months, but the result has been miserable. A few out-lying spots have been made to disappear, but the mass of the stain is in about the same condition as before. At one time while working around the periphery of the patch the central part became nearly white, but in a few weeks the color returned of about the same tone as before. Even the spots where the needle had been

plunged, producing a great deal of inflammation and crusting, do not seem to become white scars, as is usual, but become red again, even when a pit has resulted. The affected tissue seems to be unusually spongy, and must be exceedingly vascular.¹

I have tried to make a fair presentation of the facts as I have observed them, and my object has been, not so much to vaunt a particular operation as infallibly successful, as to bring out experience on a very important matter. I must say in conclusion that, so far as I know, the electrolytic method offers a number of advantages, and, in the hands of a person experienced in its employment, secures results in many instances that are very gratifying to the patients at least. I am far from saying that other methods are not equally satisfactory because I have not succeeded with them; for I believe that an operation which from lack of skill may prove unsuccessful in my hands, may be very efficient when done by one especially skilled in its performance.

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