

## DILATED VEINLETS UPON THE EXTERNAL NOSE AND SEPTUM; THEIR PERMANENT CLOSURE WITH THE POSITIVE GALVANIC NEEDLE.\*

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The electrolytic destruction of dilated and tortuous veinlets upon the external nose, because of the blemish they create, and of thin-walled little veins upon the anterior part of the septum, because of the repeated nose-bleed they give rise to, has proven a useful procedure to me, and one which has seemed worthy of a more detailed description than my brief mention of it in a previous article in 1906.<sup>1</sup> Some years ago I gave up the attempt to obliterate disfiguring veins in the skin of the external nose because, misled by the method in common use among dermatologists, I used a needle connected to the strongly caustic negative pole. In spite of the more destructive effect of this pole, as compared to the positive one, it failed to permanently close the veinlets needled, because the clot formed in the vessel at the negative or alkaline pole is soft and friable, so that it dissolves away in a few days with a restoration of the circulation in the vessel. In addition, the needle, when connected to the negative pole, with even so slight a current as one or two milliamperes, created little sloughs in the skin that led to the formation of disfiguring dry scabs, which took some weeks to separate, and left red spots for some time.

The firm clot produced at the positive pole of the galvanic current in the electrolytic clotting of aortic aneurysm led me connect the needle to this pole in the treatment of ectatic veinlets upon the nose, and their obliteration has, so far, in the cases seen by me, been lasting, my first patient having been needled three years ago with no reopening of the vessels closed. When the needle is connected to the positive pole, no slough is produced where it enters the skin, as the positive pole is only slightly caustic, and does not destroy the cutis, even when the current strength employed is beyond what is required to close the vessel operated upon, so that five milliamperes may be used without bad effect, unless the electrical action be unduly prolonged. Instead of the deep adherent scabs that follow the use of the needle when it is negative, when positive, it at

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the most produces slightly attached minute ones, that drop off in a few days.

The manner of operating is as follows: The current employed is the constant Galvanic one, derived either from a battery, or from a wall plate which reduces the street current. A rheostat and milli-ampere meter are necessary accessories. The needle used is exceedingly fine, and is of iridioplatinum, as one of steel would be quickly destroyed by the acids of the positive pole and would stain the skin black. This needle is clamped in a holder made for the purpose and in common use. The needle is connected to the positive cord of the battery or wall plate, while the negative cord is inserted in a large, flat sponge electrode placed in the patient's lap.

Where the patient is unduly sensitive to the sting of the needle when the current is turned on, he is directed to close the circuit gradually by placing his hand gently upon the sponge after the needle is inserted into the vessel. More courageous patients are told to keep the hand permanently upon the sponge, the introduction of the needle closing the circuit under these conditions. This method is more painful than the first, but permits very rapid work.

The current strength used is from two to five milliamperes, according to the fortitude of the individual treated. The weaker the current the longer is the time required to close the lumen of the vessel. The electrolytic action may be increased by pressing the hand more firmly against the sponge or diminished by making its contact lighter, the patient thus controlling the amount of electricity he is willing to endure, the hand acting as a rheostat under his guidance.

The needle point is inserted into the peripheral ends of the branches of the veinlet first, each being punctured at close intervals towards the vessel's trunk until this is reached, when it is also followed up along its whole length to its proximal end. The vessel is seen to blanch as soon as the needle is introduced and the current closed, while bubbles of gas may be observed to travel along its empty lumen. I have never known these gas bubbles to do harm, although they enter the circulation. If the needle be pulled out too soon, blood will flow, but if the current has acted long enough a white, tortuous line will be seen in the place of the veinlet attacked or in larger vessels a blackish, blue streak will mark the clot in it. Where a current of five milliamperes is used, about five seconds for each puncture will suffice to close even a larger veinlet of about knitting needle size, for the smaller vessels from one to two seconds are sufficient. The reason for puncturing the

vein along its course, and for not being satisfied with merely closing its lumen at one point is the need of excluding a reopening of the vessel by collateral channels, and of being certain of the destruction of its tunica intima.

In some cases all of the dilated veins upon the external nose may be closed at the first sitting, the patient's appearance showing an immediate improvement which is very gratifying to him. No sloughs mark the site of the punctures, as where the needle is connected to the negative pole, their location being merely indicated by an exuding drop of serum. No external application is needed after the operation. The coarser the vessels the easier is it to obliterate all of them at the same time, for larger veins remain visible in spite of the blush of the skin produced by the irritation of the treatment. Finer ones soon become hidden by the reddening of the skin, and thus a second or third sitting may be required before all of them have been found and punctured. Diffuse spots of redness, caused by a network of very fine vessels, are especially hard to eradicate.

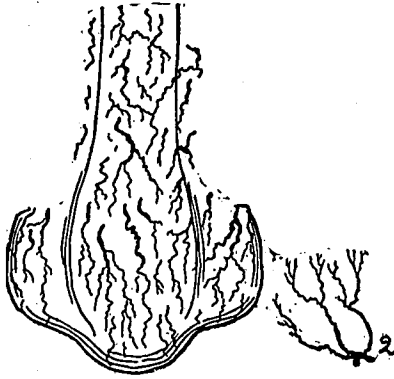
The work is very trying to the eyes, and is best done in daylight and with a pair of strong convex glasses.

I have not had the opportunity to try the effect of the positive needle upon the vascular protuberances of rhinophyma or acne rosacea, my experience being limited to dilated vessels coursing over noses not otherwise disfigured. It seems to me, however, that the multiple punctures of such outgrowths with the needle might lead to their absorption by destroying the venous plexus within them.

In addition to the relief of disfigurement by destroying ectatic vessels upon the external nose I have used positive electrolysis for the eradication of the little veins with friable walls which are situated upon the foremost part of the septum, and which are so readily torn open by the finger nail or handkerchief with resulting nose-bleed. Recurrent attacks of epistaxis produced in this manner may become a serious matter and give the patient a great deal of anxiety. In my experience spontaneous nose-bleed comes oftener from the vessels in this location upon the septum than from the other regions of the nose.

The usual method of destroying these veins is by means of the galvano-cautery. The objection to this procedure is the irritation and scabbing following it, until the destroyed epidermis has been replaced. The positive needle creates no slough in the mucous membrane, no irritation or scabbing follows its use while the vessel may be eradicated completely nevertheless.

I append sketches from life of two cases. One of them shows tortuous veins of the external nose and the other veinlets coursing down the anterior part of the septum to the nasal floor. In both of these cases complete and permanent closure of the vessels was produced.



Numerous dilated veins on external nose, all of which were caused to disappear by positive electrolysis in two sittings.

2. Dilated veinlets at front of bottom of septum. Obliterated by electrolysis.

The treatment, of course, does not prevent a later dilation of other vessels in a normal state at the time of the operation, and the patient should be warned of this. To avoid a reopening of the closed vessels, it is also necessary to be very thorough in the needling, and to use a current of sufficient strength to destroy the vessel wall about the needle.

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