further, and to doubt whether the young dracunculus, even if taken into the alimentary canal in drinking water, does, or could, come to maturity; but I am quite open to conviction on this latter point should any reliable proof or even good circumstantial evidence be brought forward in favour of the theory.

A PRINCIPLE OF TREATMENT OF INFECTED FOLLICLES OF THE SKIN.

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For clinical purposes we may look upon the follicles of the skin, whether occupied by hair or not, as elastic tubes guarded by funnel-shaped valves, the latter opening downwards, and being composed of inverted horny substance, such as forms the outer layer of the epidermis. It is unnecessary to consider the minute anatomy of the various layers of the epidermis in the follicles, as they are not of essential importance with regard to the action of local remedies.

The satisfactory results which have followed the application of saturated—that is, 97 per cent. solution of pure carbolic acid, especially in such follicular diseases as acne and sycosis, led me to make observations with the view of determining the exact condition of a diseased follicle which responded most favourably to the employment of this powerful antiseptic. In the case of superficial vesicles and pustules such a severe remedy was obviously unnecessary, and in deep indurated acne, as might have been expected, the treatment proved to be useless or nearly so. The best condition seemed to be one indicating existence of inflammation, namely, a slight redness and tendency to bulge or “pout” at the mouth of the follicle. If the horny layer covering the mouth of a follicle in this condition be punctured a quantity of serum or pus escapes, which is too much to be accounted for by a mere emptying of the mouth of the follicle; it must come from the deeper parts of its canal; in other words, there must have been a hydraulic distension. It is at the time of the existence of this distension that we have our opportunity, I believe, for getting antiseptic remedies into the depths of the follicle by endosmosis. The wider the distension of the follicle and the thinner the contained fluid, the better must be our chance of doing so. That phenol penetrates quickly into such a distended follicle is readily proved. Apply a little, let it rest half a minute, wipe it off and prick the vesicle, when usually a quantity of fluid will escape of the colour of milk, showing that the serum has already partially coagulated. It is when effusion has taken place rapidly into a follicle, and while a back pressure exists, that we may expect our remedies to reach, even if only in small percentage, to the depth of the follicle, if the strain have caused the hopper-shaped or funnel-shaped valve to give way, and bulge in the form of a slack vesicle at the follicle's mouth, the previously distended tube has probably collapsed at its deeper part, and we have lost our chance for the time being.

In practice, therefore, our object will be excite reaction in the follicles by ointments, liniments, plasters, or even medicated poultices, and just at the moment when the effusion is most active, to seize the opportunity to apply such remedies as carbolic acid in small quantity and with due care, to the mouths of a reasonable number of infected follicles at a time. In follicular diseases presenting special difficulties due to the manner of invasion by the parasite, of which small-spored ringworm is a good example, there is perhaps no greater mistake than to apply daily irritating remedies which just fall short of bringing about a cure. They excite a chronic dermatitis, which increases the amount of dead epidermis, and thereby favours the growth and spread of the parasite. There was much wisdom in the old woman's application of remedies such as poultices, to “bring disease to a head” as she expressed it.

In conclusion, to make my view possibly clearer, let me compare a follicle to a tightly-corked bottle. Let us suppose that the cork is incompressible and represents the hair, and let us suppose that the neck of the bottle is composed of living tissue capable of blistering internally or throwing out effusion which will lift it from the surface of the cork; and

that the sealing wax represents the inverted plug or horny layer. It is obvious that if the horny layer representing the seal can be penetrated—without being burst—by a strong parasiticide, the latter has the most favourable opportunity for diffusing itself through the serum, which is represented by the fluid between the neck of the bottle and cork. Just when Nature is sending serum and leucocytes through the floor and walls of our follicles, does it not seem reasonable that we should give our best remedies a chance of soaking through the roof?

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

VALVULAR DRAINAGE TUBES IN EMPYEMA.

With reference to Dr. Hutton's interesting article in the BRITISH MEDICAL JOURNAL of October 29th, 1898, on the treatment of empyema by means of a valvular drainage tube, I would wish to say that I have been using since 1895 a contrivance almost identical in principle, made for me in that year by Messrs. Arnold. Its form is shown in the accompanying figure. There is a branch which, when the tube is *in situ*,

is kept closed by a ligature. To wash the valve by a stream of hot boracic solution the branch is opened and the drainage tube is clamped between the branch and the chest. I found this necessary, as the valve tended to get fouled by dried purulent matter on its edges and was thereby rendered faulty. I used it first in March, 1895.

The case was one of acute right pleurisy, which was seen by Dr. F. Hulke, of Deal, in consultation with me several times. There was a marked tuberculous tendency in the family; and the effusion, which was excessive, and giving rise to great respiratory distress, rapidly became purulent, and, after paracentesis, very fetid. The factor soon yielded to saturated solution of boric acid, with which I washed out the pleural cavity. There was a large accumulation of air in the pleura, partly due to the inefficient sealing of the flange in the first attempt, and partly to gaseous evolution from the decomposing pus. This was not driven out during expiration so happily as in Dr. Hutton's cases. In fact, I found it necessary to insert the finest needle of Dieulafoy's aspirator into the second interspace, and then pump out the air which had accumulated in the apex. This I did to the extent of six syringefuls at the time before the patient complained of a feeling of constriction of the chest. The patient made a very satisfactory recovery in every respect.

The point of greatest importance, which Dr. Hutton hardly emphasises sufficiently, is the necessity for the exclusion of air, or its removal if necessary, not only on antiseptic grounds, but on purely mechanical principles. In simple uncomplicated empyema this is the main factor in the continuance of