respiratory organs, which we have generally seen relieved with this remedy, has been more commonly referred by the patient to the throat, or larynx, and greatly aggravated by talking, coughing and lying down; and we have seen it give prompt relief, in its highest potencies, when this symptom was so severe as to greatly alarm the patient for fear of immediate suffocation. Some years since we cured at once, the most violent case of this kind arising from a severe cold, that we have ever seen, with one dose of Phosphorus $3^{m}$, after failing with three or four other drugs, but have now forgotten whether Ars. Alb. was one of these, though think it was not.

Pulmonary Œdema of the right lung, that is, an effusion of water into the extra-vesicular cellular tissue of the lung, we have promptly cured with Arsenicum $8^{m}$, when the effusion was so great as to press most of the air-cells together, and prevent much air from being received into that lung, and when all the indications were that the case must soon terminate fatally if relief was not given.

We regret having been unable to prepare for this number, as we intended to have done, the indications for, with cases illustrating the action of, that drug which, in our hands, has held a similar relation to about the middle third of the right lung, as has Arsenicum upon the upper third of the same. We will endeavor to have this appear in our next.



## THE METASTASIS OF DISEASE AND THE LAW OF ITS ACTION.

[One of the most important points for the physician to determine, in the treatment of disease, is, whether he is getting a *curative* action, or only a *transferring* action, from the drugs he is administering; and to know, when he dismisses his patient, whether he has *cured* his disease, or simply *suppressed* it in its original form, and driven it to a more vital part, there to show itself, sooner or later, in a more fatal character.]

The *fact* of the metastasis of disease, or that diseases sometimes change their location in the system, leaving one organ, or part, and seizing upon another, and that they do this sometimes suddenly, at other times more leisurely, has long been known to the profession. The *Law* governing this, however, it seems was not known, until we discovered and announced it, in 1859. At least we have never seen any allusion to such law, or claim that one existed, excepting such as we have ourselves made.

This law we will now explain. But preliminary to this, it becomes necessary to state a fact, which long, careful and extensive observation, and years of reflection have convinced us of beyond all question or doubt, even, namely, that each and every *primary* disease, or species of primary disease, is specific to, and has its *seat* in, or upon, some one particular class of tissues, which, whatever else it may do, it never leaves, to locate itself in tissues *dissimilar* to those in which it commenced. And furthermore that though it may, and in fact almost always does, disturb some, and occasionally, perhaps, all of the other classes of tissues in the whole system, it does this only, or solely in consequence, or as an indi-

rect result of, its continued primary or direct action upon that class in which it has its natural home. Much of the proof of this characteristic of disease will be found to follow, still there is much, also, which we cannot now turn aside to consider.

Well, then, such being the nature and specific action of disease, the law of metastasis is such, that it compels *all* primary diseases, when they change their location in the system, to seize upon the *same class of tissues* in the organ or part they select for their new seat of action, as that which they left to make the change. Many of the secondary diseases also obey this law. The distinction which we make between primary and secondary disease will appear as we proceed with our subject.

If the disease is of that character that its most natural seat is in or upon the skin, like measles, scarlet-fever, small-pox, erysipelas, etc., among the acute cutaneous diseases, or scabies, salt-rheum, tinea-capitis, psoriasis, lepra, etc., etc., among the chronic, and is suppressed by external treatment, or from other causes, leaves this texture to go internally, it *always* seizes upon some one or more of the tracts of *mucous membrane*, and locates therein; this membrane being essentially the same tissue as the skin, and the only internal texture which is analogous to it, as we shall soon show. We will here add, also, that diseases belonging to this class of tissues frequently change about from one mucous tract to another, for instance, from the genital or alimentary mucous membrane to that of the respiratory organs, etc.; and this very commonly, under local, or other improper treatment, as we shall have occasion to prove by great numbers of cases.



Diseases of the serous membranes obey the same law. Inflammation, or other diseased action which belongs more naturally to the serous membranes of the joints, for instance, always seats upon the serous membrane of some of the vital organs, when transferred, from any cause, internally. The same is true of disease of the glands. Metastasis always leaves the disease still acting upon the glands; and this is true, even where the difference of sex *involves the necessity*, as in the case of mumps, of seeking such glands in *different parts of the human organism*. Again, the nervous system exhibits the same fact. Symptoms, or diseases, which belong naturally to this system of tissues, and arise in any part thereof, will, when locally tampered with, or from other influences, frequently disappear from one part and reappear in another, but always upon the nerves, as is almost daily seen in neuralgia, etc. Phlebitis and other specific diseases of the veins, also, equally recognize this law; as, in all the changes of location of these, they never leave the veins for any other tissue. Bone periosteum, areolar tissue, etc., etc., all furnish familiar illustrations of the same prescribed law. This, then, is the law of metastasis and the method of its working. It compels disease to confine and continue its primary action to that class or system of tissues, upon, or in which, it commenced operations; and forbids its

acting upon any other tissues, excepting, as it does this *secondarily*, or as a *result* of its continued specific action upon that class in which it commenced, and in which it must still continue such specific work until cured.

We well know there are many apparent exceptions to this law, as we have here laid it down, but that these are only apparent, we shall endeavor to prove. For instance, we shall show that the exceptions are the secondary diseases arising in consequence of the derangements of the blood caused by the primary disease, and that no part of the latter has left those tissues upon which it originally seated to go to another class. The secondary diseases arising from derangements of the blood are far more numerous, and of much wider range in variety, as occurring from the action of the primary disease upon the *mucous membranes*, than they are from the action of the latter upon any other animal textures, as we will explain; but before wee nter upon this we must first show that the skin and mucous membrane, both belong to the same class of tissues as we have asserted, and this we now proceed to do.

Anatomy teaches us that these two tissues, viz., the skin and mucous membrane, are nearly identical in structure, the latter lining or covering the inner surface of all the internal cavities which open upon the surface of the body, just as the skin envelopes the external surface of every part of the body; so that in fact the one is simply a continuation of the other. Wilson, in his anatomy, so treats them. He says:



"The skin is the exterior investment of the body, which it serves to cover and protect. It is continuous at the apertures of the internal cavities, with the lining membrane of those cavities, the internal skin, or mucous membrane. Mucous membrane is analogous to the cutaneous covering of the exterior of the body, and resembles that tissue very closely, in its structure. * * * * * * The epithelium is the epiderma of the mucous membrane. Throughout the pharynx and œsophagus it resembles the epiderma, both in appearance and character."

But anatomical identity, in these two tissues, is not all, here, for they may, in addition to this, be made to exchange physiological functions, to a certain extent.

We quote Carpenter:

"It is interesting to observe, that when a portion of the cutaneous surface has been turned inwards, so as to form part of the boundary of one of the internal cavities, (as in plastic operations for the restoration of lips, eyelids, &c.,) it undergoes a gradual modification in its character, and comes, after a time, to present the appearance of an ordinary mucous membrane."

The reverse of this, in regard to these two tissues, is no less true; for when a portion of mucous membrane, from any cause, is turned to the surface, it hardens and assumes the functions which belong to true skin.

The close natural similarity, then, if not the actual identity of these two tissues, namely, the skin and the mucous membrane, being clearly established, we are now prepared to realize that the dis-

eases of the two, according to the law of metastasis, as we claim this to act, must be similar, and that, therefore, the transfer of diseases of the skin internally, whether caused by external applications, which is most frequently the case, or by some internal action, as is not unknown, must, of *necessity*, be to the mucous membranes. This gives us, when thus seated, some form of what is called *constitutional disease*, the precise nature of which being determined, of course, by the mucous surface which is attacked. Were it necessary to further fortify the position here assumed, it would be easy to establish it, in the most positive manner, in regard to a variety of cutaneous diseases, by the authority of the most accredited Allopathic observers. We might cite, for instance, of these diseases, the small-pox, measles, scarlatina, erysipelas, herpes, elephantiasis, urticaria, lepra, etc., etc.; and with these the details, in full, of Watson, Wood, Dunglison, Patterson, Gregory, Macintosh, and others, in regard to them, from which the most direct and reliable evidence can be drawn to sustain our position in its fullest extent—that if these diseases are not allowed to act upon the skin they will upon the mucous membranes—but to what possible purpose? All which these authors have carefully done, in this way, is familiar to every well-read physician, of whatever school; and so is the degree of weight which is accorded to each name cited; and it therefore seems wholly superfluous to cumber our pages with what every student has read, and the same that physicians, generally, possess in their professional libraries.



We will simply add, that we went over this whole field, years ago, in a careful research for the truth, and found this uniform record, namely, whenever there occurred a metastasis of the skin eruption, to internal organs, whether of small-pox, scarlet-fever, measles, erysipelas, etc., among the acute skin diseases, or of that of all the chronic cutaneous diseases of which we could find any record in this direction, and death resulted, as it always must sooner or later in such cases, unless the eruption is restored to the skin, post-mortem examinations *always* revealed a far worse diseased condition of some one or more tracts of mucous membrane than that of any other class of internal tissues; unless it was that congestion, inflammation or ulceration, involved all the tissues of a portion, or the whole of an organ. But in that case these results came not from the action of the *specific* disease upon all the involved tissues, but from the effects of this upon the mucous surface, and through this upon the blood, as we shall endeavor to prove. Of the fact that the suppressed skin disease locates upon the mucous membranes, and only upon these of all the internal tissues, we have only the space here to give one short extract in proof. Wood, in speaking of "Anatomical Characters," observed in the post-mortem examinations of those dying of small-pox, says:

"The only characteristic alterations are those upon the skin

and mucous surfaces. It is true that signs of inflammation are often found in the lungs, pleura, membranes of the brain, etc., but these lesions are neither constant nor essential, and offer nothing in small-pox to distinguish them from analogous changes in other diseases."

Every observing physician knows the same to be true of both the premonitory and subsequent conditions of the mucous surfaces in measles, scarlet-fever, etc.

It should be remembered, in this connection, that in what the authors named say upon the points to which we have called attention, they were not advocating any theory, as they knew nothing of the law of metastasis, or that such results were governed by any law, but were faithfully recording what they saw in their examinations of the dead of those diseases.

All skin diseases, whatever their specific nature, and whether acute or chronic, equally recognize and obey this law. But there is generally a great difference in the time required for an internal development of the two classes, acute and chronic. The violence and rapidity of action of the former, or the acute cutaneous maladies, is such, that when suppressed, or they of their own accord set to work internally, they there become even more violent and rapid in their work, and very soon kill, unless speedily and fully restored to their natural place upon the skin. The chronic skin eruptions, on the contrary, when suppressed may even lie dormant in the system for many years after the suppression; as long, in fact, as the vital force of the individual system—



this varying greatly, of course, in different persons—is sufficiently vigorous to keep it under; but when this power is no longer sufficient to accomplish that result, then the disease reappears, in some form, and in due time completes its work. This is often exemplified in children, when the digestion and nutrition are very active, and the vitality is vigorous. Such a child may have a chronic eruption suppressed and it will often lie dormant through the whole period of youth; but when this is passed, the nutrition becomes less active, and consequently changes in the tissues are effected more slowly, and with less vigor, while the disease is thus afforded more opportunity for fixing itself upon some of the mucous surfaces, and developing itself more or less rapidly there, in accordance with the degree of resistance it may encounter from the repellant power of the vital force. In some instances, however, because of feeble constitutions, and perhaps also from other causes, the suppressed chronic eruptions will immediately commence their specific action internally, but from their much more sluggish movements, as compared with the acute, they afford the system much more time to accommodate itself to their encroachments, so do not generally so speedily terminate life as do the acute; still, we are not wanting in the record of numerous cases where the suppression of chronic cutaneous diseases has been followed by as immediate and violent death as a suppression of any of the acute eruptions often cause.

[*To be continued.*]