

SKIN DISEASES TREATED BY BLOOD VACCINE.

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(Read 10th October, 1910.)

Dr. Grove W. Wende, of Buffalo, as Chairman of the Section of Dermatology of the American Medical Association, in an address in St. Louis, June, 1910, devoted his attention to the consideration of Skin Diseases to Medicine as a whole. He laid stress on the fact that specialising in one branch of medicine tended to narrowness of observation and loss of perspective that impaired the broadest utilisation of the observations made. He considered it advisable that dermatologists should make some effort to bridge the ever-widening separation between that specialty and the field of internal medicines. General cases should be sought and discovered, and the work of the clinique and the laboratory should be united in the investigation of causes and broad relations.

With the exception of parasitic and local inflammatory affections of the skin, it may be said that skin diseases are for the most part simply superficial local manifestations or complications of general or special morbid states. Skin diseases, in short, are nothing but symptoms in many cases.

Crude notions of a blood diathesis still persist with the profession. Thus the uric acid diathesis theory of skin affections is nothing but misleading—the cloak of ignorance. There may be an element of truth underlying some of these crude notions, because metabolic processes form the foundation of life, and errors of metabolism may be presumed to account for many of the variations from normal in the different tissues and functions of the body. He instances the following diseases as especially calling for co-operation between dermatologists and internists—exudative erythema, after

co-incident with acute nephritis; bronchitis, pericarditis, arthritis, or alimentary canal complications." Many times, he asserts, operations have actually been performed for supposed appendicitis, intussusception, etc., which would have been avoided by a knowledge of the correlation of such abdominal symptoms with erythemata. He mentions, amongst other skin eruptions as the outward manifestation of internal disease, syphilitic rashes, itchings of urinary meatus, furunculosis, and ulcerations at the base of nail in diabetes, and the eruptions of fevers.

For some months before reading this article I have been looking to the condition of the blood stream for an explanation of some skin affections, and for an indication as to what direction treatment of the condition should take. The routine followed is to take a blood smear from the lobe of the ear or finger, and I have found that from an immediate examination of the hanging drop of blood interesting information as to the exact relation of the lesion through the health of the patient may be obtained.

And in this direction I am convinced more work should be done. By the time a sample of blood has been transferred from the clinician to the bacteriologist, many interesting features to be observed in the fresh blood are lost, and the wonderful check which one has in comparing the fresh blood in the treatment during different stages is missed.

Most cases of skin diseases are generally signs of a general discrasia, and signs of this general discrasia may also be seen in an altered condition of the blood plasma and blood corpuscles.

The improvement of the blood picture as treatment progresses is a most interesting thing to watch, and the simultaneous improvement in the health of the patient shows that normal looking blood is a sufficient and satisfactory index of normal health.

I am dealing more particularly with skin lesions, the effect of treatment on which can be seen by even the uninstructed. Acne is, I believe, mainly a staphylococcic infection of the skin, primarily due to infection of the blood stream either through the tonsils or through the alimentary tract, which, of course, includes the liver.

This explains, I think, the frequent association of acne with adolescence. The teeth are generally in their most offensive and septic condition between fourteen and twenty-one, and the blood stream is more likely to show signs of intolerance at this age when an immunity has not yet been established, and when the general high state of nutrition of the body drives the cocci and the bacilli to the skin glands, especially to the face, where the circulation is probably least effective.

The occurrence of acne about the seat of election of rodent ulcer is suggestive, although the ulcer is more confined in its boundaries. Carbuncle also chooses somewhat the same ground as acne, and also furunculosis, sycosis, seborrhoea, and other staphylococcic diseases.

Allied with the staphylococcus we have a bacillus, but the staphylococcus is most exuberant in its growth, and the rapidity with which fresh crops of acne appear makes it unlikely that the bacillus is the main cause of the eruption.

Skin nutrition and texture, and the much despised diathesis must have something to do with the development of acne. Certainly complexions vary, and the milky and pink and white complexions, either with dark or bright hair, show a wonderful amount of immunity. The muddy, greasy skin is far more liable to the infection; in this skin there is already a tendency to overgrowth of sweat and sebaceous glands, which harbour the coccus, and contain masses of sebum, etc., an excellent medium for its cultivation. The directions given for the obtaining and cultivating of the bacillus of acne are:—A thorough cleansing of the skin over a large acne pustule or spot, the piercing of it with a sterile needle, or glass point drawn out in a flame, the cultivation of the lymph or pus obtained on a suitable medium for at least forty-eight hours, and some instances for a week or a fortnight. The growth thus obtained is said to cause an outcrop of acne pustules where rubbed into the skin of a susceptible person. This has been considered proof that the acne rash is the result of an inoculation of the skin with what is called the acne bacillus.

It is somewhat doubtful whether this so-called acne bacillus is the real or sole cause of acne.

I have recently had under my care several cases of acne of a persistent character. The first was in a young woman of 25 years, who has suffered with amenorrhoea and dismenorrhoea for several years, and whose face has been greatly disfigured by the skin eruption for the past three years. In March of last year she had a trip to Java, and in the tropics the skin became quite clean, probably owing to free perspiration carrying away toxins and flushing the skin thoroughly. On her return to Australia she had three months' treatment with radium in Melbourne, and got back to Hobart at the end of last year free of her rash. The spots began to appear after a month or two, and early in the year I ordered her to bed for a severe attack of pain in the left iliac region—probably ovarian associated with dysmenorrhoea. The patient was very anaemic, with a foul tongue, no temperature, haemic sounds in pulmonary area, and re-duplication of apical sounds. She remained in bed three weeks, and treated the rash with radium; the diet was restricted to milk. For several days nothing but milk was given, a little fruit, but no eggs or meat allowed. The general condition improved, and the face became almost quite free of acne, but as spots continually appeared, I made an autogenous vaccine, and injected it a few times. This culture, after twenty-four to forty-eight hours, contained large staphylococci alone, but after a week numerous bacilli made their appearance actively mobile, and very like the bacillus coli in movements and staining. The patient, after two or three injections, went to Sydney for the winter, and remained free of the acne until lately, when it returned on her arrival in Melbourne. I think that with a longer treatment of autogenous vaccine I should have obtained a perfect result, judging from subsequent experience. The blood was not examined in this instance.

Since this I have made a routine of blood examination in every case, and have checked the improvement of the patient by the blood picture.

Another case of acne was in a young girl of 17 years, who had tried state school teaching, but had been obliged to give it up on account of severe headaches, shivering and vomiting attacks occurring at short intervals. In this patient the blood showed excess of blood platelets, and many small leucocytes, with a low haemoglobin index, and a general leucocytosis. Some cocci

and bacilli were visible in the blood plasma, and some of the cells also seemed to contain cocci. An acne vaccine was made from the blood drawn through an acne nodule. The skin of the forehead was thoroughly scrubbed with ether soap and absolute alcohol, and then collodion was painted over the spot to be pricked, and the blood taken from the surface of collodion as it welled through. The skin was so thoroughly treated that it peeled off the forehead for the next week or so.

A culture of the blood gave numerous cocci and some bacilli, which formed small, gaseous bubbles in the nutrient agar. Injection with a vaccine made from this when given too freely on one occasion brought on a severe attack of nausea and shivering, with frontal headache and great lassitude—"one of my old attacks," the girl called it. The acne disappeared entirely, and the blood showed a most gratifying picture—the bulb was perfectly clear, with none but multinuclear leucocytes present, and the platelets somewhat in excess, due to breaking down of exuberant leucocytes.

Lichen Acuminatis in at least two patients has responded to similar treatment. In these cases a vaccine prepared from the blood was used. One patient showed symptoms of general anaemia, with oedema of lower limbs, constant pain in left hypochondriac region. The skin, after several injections of vaccine, is peeling off, leaving a smooth, epithelial surface, while the general condition is vastly improved.

Another set of skin affections, apparently having their origin in general blood infection, is the herpetic which occurs as a chronic condition by no means rarely. A culture of blood in such a case within the past month has given me a pure cultivation of a bacillus, probably the colon. And this is what one would expect to develop in such a condition where the skin lesion is caused by a localised peripheral neuritis. It has proved very obstinate to ordinary remedies, and has disappeared rapidly after treatment with an autogenous blood vaccine.

Pemphigus is now considered a streptococcal infection, and it also should be treated by a vaccine made either from a fluid in the vesicle or from the blood of a patient.

If this theory of skin disease causation, it should be possible thus to cope with such a malignant affection as *pehphigus foliacus*, which not only appears on a skin surface, but sometimes on the pharyngeal mucous membrane.

Chronic eczema is dependent, to a great extent, on a general toxemia of some kind. Its relationship to asthma, Bright's disease, etc., is well known. It is in some cases affected by injections of staphylococcic vaccine, and probably would respond rapidly to an autogenous blood vaccine. Alopecia areata is probably the result of a neuritis caused by blood organisms. The presence of organismal growth in the blood in various illnesses is well recognised to-day. Tubercle bacilli, gonococci, pneumococci, streptococci, bacilli anthracis have been demonstrated, and very many tropical diseases have been proved to be due to the presence of haematozoa in the blood corpuscles and blood-forming glands. The blood, therefore, is not the aseptic stream formerly supposed. It will soon be recognised, I am sure, that in city dwellers, at all events, cocci and bacilli—particularly the bacilli colon—can be seen in this blood, and that most anaemias and neurasthenias are due to loss of resistance to these organisms.

The effect of treatment on skin diseases can be seen and appreciated, and certainly an autogenous blood vaccine has given most promising results.