

Yandell (L.P.)

**MALARIA AND STRUMA,**

in their relation to the

**ETIOLOGY OF SKIN DISEASES.**

BY

L. P. VANDELL, JR., M. D.

LOUISVILLE, KY.

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# MALARIA AND STRUMA:

THEIR RELATION TO THE

## Etiology of Skin Diseases.

READ BEFORE THE

AMERICAN DERMATOLOGICAL ASSOCIATION,

AT NIAGARA FALLS, SEPTEMBER, 1877.

BY LUNSFORD P. YANDELL, JR., M. D.

*Professor of Clinical Medicine and Therapeutics, University of Louisville.*

REPRINTED FROM THE AMERICAN PRACTITIONER, JANUARY, 1878.

LOUISVILLE, KY.

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# MALARIA AND STRUMA,

IN THEIR RELATION TO THE

## Etiology of Skin Diseases.

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*Mr. President and Gentlemen:*

The opinions held by your reporter, on the etiology of dermal lesions, are already known to most of the members of the association, and, so far as my knowledge extends, are shared by none. It is for the purpose of bringing these views before you somewhat more elaborately, and in the hope of impressing you with their correctness and importance, that I am with you to-day.

The very imperfect and unsatisfactory state of this branch of dermatology—*i. e.*, its etiology—as compared to the anatomy, physiology, and pathology of the subject, must have impressed itself upon all; and if I am enabled to throw light on the etiology, I shall thereby make clearer the therapeutics of the science for whose advancement we are assembled.

In the beginning let me say, that the etiological doctrines of this report are the result of clinical observation and experience, not of theory and speculation; and it is my belief that from the sick and not from the laboratory, from experimental therapeutics and not from the microscope, our practical medical knowledge is destined to come.

The skin, though differing distinctly in feature and function from the other tissues, is yet composed of similar materials chemically, and is nourished and governed by the same blood and nervous fluid common to all. Therefore, it is rational to suppose that the same influences which produce disease elsewhere produce disease in it; and in dermatological investigation, we should interrogate the complaining organ with reference to the poisons—animal, vegetable, mineral, aqueous, aerial—and to heat, cold, ingesta, functional abuse, traumatism, the heredities, and any other source of disease known to exist.

Excluding the exanthemata, each of which has a special cause, and for none of which have we yet discovered prophylactic or remedy, save only variola and syphilis, and excluding also the parasitic diseases, I hold that in malaria we find the chief source of acute skin disease, and that to scrofula most of the chronic skin diseases may be traced; and that the more inveterate examples of either class are commonly due to a coëxistence of these two causes. And, furthermore, that the favorable or unfavorable course and termination even of the exanthemata are largely influenced by the presence or absence of scrofula and malaria in the patients.

By the word malaria—literally signifying bad air—I need scarcely say that I mean what is otherwise denominated marsh miasm. The former is the preferable name, because of its brevity, its universal currency, and because of the bad pre-eminence of this bad air. Marsh miasm is an unfortunate term, which has done much to mislead the profession as well as the people. This is evidenced by the fact that we very often hear the presence of malaria denied, on the ground that no marsh or swamp, lagune or pond, is adjacent to the accused locality; whereas we know that no fact in medicine is more firmly established than that malaria may arise without these things. In the rich oases of the Sahara desert, and on the sides of the Rocky Mountains, this mysterious poison exerts its baleful influence. Dr. Dickson says, in his *Elements of Medicine*, speaking of malarial fevers: "We find these fevers

on the cold fens of Holland and Lincolnshire, as well as on the rich rice-fields of the sunny south; on the smiling hills which overlook the Hudson, as well as among the swamps and marshes; on the lime-rock of Kentucky and Tennessee, the clay of Alabama and South Carolina, the sandy barrens of her northern sister, and the granite and sienite of the Empire State; on the volcanic tufa of Civita Castellano and the Roman campagna, and in the very crater and on the sides of extinct volcanoes, as at Balsina and Milo."

Hertz, in Ziemssen's Cyclopædia, quoting, I presume, from Humboldt, after stating that these fevers may originate on a dry soil and in mountainous regions, says:—"On the Tuscan Apennines at a height of eleven hundred feet, on the Pyrenees at five thousand feet, on the island of Ceylon at six thousand five hundred feet, and in Peru at an elevation of ten thousand to eleven thousand feet, malaria is found." According to the same author, malaria, though most frequently developed in summer, may originate in mild winters; and, in my own experience, I have encountered intermittents which certainly had been produced in winter time. Hertz also asserts, what I believe is universally acknowledged, that an average summer temperature of fifty-nine to fifty-nine and eight-tenths Fahrenheit, which is sufficient to induce vegetable decomposition, produces malarial fever. It is also perfectly established that malaria may spring from meadows, from the clearing of forests, from reservoirs, great lakes, millponds, sluggish streams, bilge water, and the water carried for drinking purposes on ships. The turning up of the soil, as in plowing and ditching, and in the construction of fortifications, is a well known cause of malaria.

As to the nature of the poison in question, it would be a waste of time to consider the various suggestions that have been put forth about it, as that it is a sulphurous or saline vapor, carbonic acid, hydrosulphuretted or hydrocarburetted or hydrophosphoretted gas, exhalations from volcanic soil, or ozone or azote, or may depend upon diminished atmospheric elasticity, electricity, or may be an exhalation of living as

well as of decaying plants; or that which is taken for malaria may be caused by heat, atmospherical moisture, vicissitudes of temperature, or sulphuret of iron in the soil, or may be animalculæ or vegetable organisms, or may be the result of absence of animal quinia or taurine in the blood, or from a deranged liver; or finally may be caused by the influence of the dog-star, as was once believed.

*Pathological evidences of malarial origin of acute skin diseases.*—In numerous instances these evidences are patent even to the superficial observer, and may be perceived in the pale, enlarged, flabby and teeth-indented tongue, in the anæmic or muddy complexion, and in distinct malarial periodicity. I say malarial periodicity, because we have scrofulous periodicity as well as periodicity in diseases neither malarial nor scrofulous. Indeed, periodicity is a habit, not alone of disease but of health, not alone in the human system but as well in the aqueous and atmospheric oceans, the heavenly bodies, and even it is asserted of the convulsions of nature.

In a large proportion of cases, however, it is only by patient, careful, and minute inquiry and investigation, that we are able to detect the malarial element. Prolonged malarial disease may exist without any apparent anæmia or pigmentary discoloration, though the opposite is the rule.

The cutaneous lesion may be more pronounced at a certain period of the day, or on certain days, in its color or in the sensations of heat, pruritus or pain, or its secretion may be periodically augmented. Again, the eruption may evince no periodicity, but some organ or function of the body will do so, and the treatment which cures the one removes the other. Furthermore, though no form of periodicity be discernible, yet the antiperiodics will cure these diseases with more certainty than any other medicines, and also more promptly.

These facts I verify daily in my private and dispensary practice in Louisville. In the inmates of hospitals and in private individuals, in New York and Philadelphia, and in Boston and its vicinity, as well as in the southern cities, I have been enabled to distinctly recognize the marks of malarial poison;

of course in a milder form in the north than the south. It can not be denied that in all the northern states the summer heat is sufficient every season to develop malaria, though it be less universal in extent and of a less intense form than in the southern states. Your lakes, fish-ponds, mill-ponds, canals, reservoirs and rivers, are all sources of malarial poison. In all the cities above enumerated you have the commingling of salt and fresh water in the mouths of your rivers, and than this there is no more certain nor universally admitted source of malaria. In addition to all this, in all these cities and in all other cities with which I am acquainted, there are wooden pavements, and these, rotting under the combined influence of the summer's sun and the water sprinkled daily on them to lay the dust, may be foci of the potent and insidious miasm.

Another exceedingly important circumstance to remember, and one so far as I am aware not hitherto pointed out, is that all malarial manifestations are not accompanied by elevation of the temperature of the body or acceleration of the pulse. Hence the term "masked intermittent fever" is not always strictly correct, as applied to cutaneous, intestinal, uterine, neurotic, and other maladies, in which malarial *periodicity* is oftentimes a feature. In other words, we may have malarial intermittent affections without any sign of fever. This is most common in the less intensely malarial districts. The febrile feature of malaria is most prevalent in the more intensely malarial regions.

*Therapeutical evidences of the malarial origin of acute skin disease.*—Antiperiodics, properly administered, yield the surest and speediest results in far the greater number of acute skin diseases. At the head of malarial antiperiodics stand quinia and the other alkaloids of Peruvian bark, and next stands arsenic. Iron in skin diseases, as in all others, is almost indispensable to perfect their cure. Any of the remedies which may relieve intermittent fever, and they are almost innumerable, may cure malarial skin diseases. Furthermore, malarial diseases, of whatever form, will sometimes get well without

medicine. The time of the administration of the Peruvian bark salts is, according to my experience, of the first importance. They should never be given during, or immediately preceding or immediately subsequent to, a malarial manifestation, whether this come in the shape of a chill, a neuralgia, a diarrhœa, a cough, or a skin eruption. They should be administered to the extent of fifteen or twenty grains, or more if need be, of quinia, or twenty to thirty or more grains of cinchonia, cinchonidia, cinchonix, etc., in divided doses. The first dose should be given not more than eight hours before the paroxysm, and the last not less than two hours preceding the expected paroxysm or exacerbation.

*An imperfect list of the dermatoses which may be developed by malaria.*—Acne simplex, acne rosacea, the erythemata, urticaria, eczema, all the forms of herpes, the acute lichens, prurigo, impetigo, miliaria rubra, ecthyma, acute pityriasis; the furunculous affections, and under this head I include boils, carbuncles, felons, malignant pustules, and erysipelas; also elephantiasis græcorum, pellagra, dermal anæsthesia, dermalgia, dermal hyperæsthesia, anidrosis, bromidrosis, hyperidrosis, chloasma.

The malarial poison alone may develop cutaneous disease, and again it may require a traumatism, an indiscretion in diet, a wetting, extraordinary heat or cold, a sudden change of atmosphere or clothing, loss of sleep, or some such thing in addition, to call forth the eruption. The performance of the natural functions, as parturition, menstruation and dentition, for instance, in persons predisposed to malarial disease, or having within them latent malaria, oftentimes excites the skin eruption.

With the mention of two additional facts which impress me as strong evidences of the correctness of my doctrine, I conclude this branch of the subject:

*First.* Negroes are far less subject to malarial poison than white persons, and they are remarkably exempt from most of the skin diseases just now enumerated.

*Second.* In India, during the height of the mango season,

a severe form of furuncles is prone to occur, and these are called "mango boils," under the impression that eating this fruit produces them. Now, the mango ripens during the early portion of the rainy season, at which time malaria is most rife and virulent, owing probably to the rotting of the luxuriant tropical vegetation drowned by the water. The profuse rains soon wash off this decaying material into the streams, which carry it to the sea and also cool the atmosphere, and with these results there occurs a subsidence of the malarial fevers and the mango boils. This fact in regard to the mango boil was furnished me by a very intelligent and cultivated Anglo-Indian, some twelve months since, to whom I had communicated my views on malaria.

I now come to the second branch of the subject.

*Scrofula in Dermatology.*—Both the profession and the public are likely to obstinately combat, and indeed to resent, the idea of the scrofulous origin of skin disease, for the reason that scrofula is universally considered a vulgar and disreputable disease; and no one likes to acknowledge its existence either in his person or in his family. My time will not admit of the consideration of the nature of scrofula at any length on this occasion. I believe it to be a disease of nutrition leading usually to the deposit of tuberculous matter. It affects all portions of the system. In the lungs it is called consumption, and in the glands and bones it is called scrofula. It is found in all races and climates, and no age is entirely exempt from it. It is both hereditary and acquirable. It may remain latent in the system of an individual for an indefinite period of years, and indeed it may not only remain latent in the system of an individual, but even for a generation or more, and may then be brought into active existence by some disease or injury, or by the performance of a natural function, as of dentition, menstruation, parturition, or the like. It is immensely the most prolific of all the sources of human death. It not only kills of itself, but often determines the course and the termination of other diseases.

But few physicians even I am persuaded have a just conception of the extended prevalence of scrofula. According to Sir James Simpson, this disease carries off seventy thousand persons annually in Great Britain, in a population of thirty millions, which is two thousand and a third to every million; and it is fair to estimate that this calculation only embraces the frank, well-defined cases, and does not include numerous deaths from obscure forms of scrofula. Lawrence, in his work on the eye, quotes Beer as follows:—"Nine-tenths of the ophthalmia in Vienna in children is scrofulous." In Breslau it is greater, according to Benedict, the proportion being *ninety-five per cent.*; and "*not a single family in Scotland is free from scrofula,*" according to Dr. Gregory, of Edinburgh. Dr. John Thompson, in his lectures on inflammation, says:—"It is rare to meet with an individual who has not, at some period of his life, experienced disease in some shape or another belonging to one of the several forms of scrofula." The latter quotations are from Lawrence's work.

In our own country, scrofula, though exceedingly prevalent, and killing more people than any other disease, is far less frequent, I am satisfied from personal observation, than it is in Europe. It is safe to attribute this to the superior abundance of our food and to the abundance of meat especially, and to the better ventilation of the houses of our masses. It may be that the commingling of blood of the many nations from which our population springs also exerts a beneficent influence. So much for the exceeding prevalence of scrofula; and no sound reason can be given why, if it be so abundant in the human system, the skin may not be its frequent seat.

The evidences of the scrofulous diathesis are easily discoverable in the language of the body of a very large proportion of persons coming under observation of the physician; but it is not necessary to enumerate here the signs of scrofula.

The following diseases of the skin are certainly due to scrofula:—Lupus, psoriasis, ichthyosis, scleroderma.

The next following I believe to be due to the scrofulous

diathesis:—Molluscum fibrosum, chronic lichen, lentigo, veruca, albinism, scleroderma, keloid, nævus, pemphigus, and pityriasis.

The following diseases are oftenest found in the scrofulous diathesis:—The more obstinate and severer forms of true acne, acne rosacea, impetigo contagiosum, herpes zoster, pemphigus, nonscorbutic purpura, vitiligo, favus, and the other vegetable parasites of the skin.

The foregoing is of course only a very imperfect list, but I trust it is sufficient to convey my meaning.

*Therapeutical proof of scrofula.*—In the scrofuloderma, as well as in all forms of scrofulous disease, our therapeutical measures are sometimes of little or no avail. In psoriasis, ichthyosis and lupus, however, I have found the antiscrofulous remedies, the constructive remedies, such as cod-liver oil, syrup of the hypophosphites, syrup of iodide of iron, malt, etc., extremely reliable. This line of treatment has given me results the most satisfactory; under it these diseases are curable, and under no other are they with any degree of certainty according to my experience:

Thus briefly are the views on malaria and struma, in their relation to the cutaneous lesions, which have forced themselves upon my mind during twenty years of clinical observation. It is something more than ten years since I became especially interested in the study of skin diseases; but I must confess that their cure was most uncertain, and their management most unsatisfactory, until I learned to treat them with reference to their causes, having first learned from clinical study that they originated in the same causes which produced the other forms of disease.

In conclusion, I respectfully ask of the members of this association a fair, careful, and critical investigation of this most important subject.

NOTE.—After the reading of the foregoing report, Dr. Bulkley, of New York, moved that a committee be appointed to investigate the subject clinically, and to report at the next meeting.

Dr. Heitzmann, of New York, opposed such action on the ground that the doctrine was an old one, having been brought forward by a Hungarian physician, Dr. Poor, ten years ago, and having been disproved in Hebra's clinic. This Hungarian claimed, Dr. Heitzmann said, that *all* acute skin diseases originated in malaria, and *all* chronic skin diseases originated in scrofula. Dr. Heitzmann further declared that there is no malaria in Vienna.

Dr. White, president of the association, stated that malaria is unknown in Boston.

Dr. Bulkley, of New York, said that the malarial element was of little or no account in the skin diseases in New York; and none of the fourteen members present were inclined to accept my views.

The action of my colleagues of the American Dermatological Association was not unexpected by me; indeed, it was perfectly natural under the circumstances. Men of science should be slow to embrace new ideas, and no doctrine deserves to receive credence until it has been rigorously investigated. All that I ask is an unprejudiced clinical examination of this subject by the profession. If my opinions are correct, then I have brought most valuable truths to light; if my opinions are wrong, then the etiology of the skin diseases only remains in its former obscurity. The statement of Dr. Heitzmann that my views are old, and that a Dr. Poor, of Hungary, had announced the same doctrine ten years ago in Germany, was news to the other members of the association as it was to me. I had believed myself the discoverer of the important facts concerning the causes and treatment of skin diseases which I have been teaching for five years. The truth of the ideas in question, however, and not the priority of their discovery, is what we are all interested in.

Drs. White and Bulkley and Heitzmann are gentlemen of learning and distinction in dermatology, and I justly appreciate the weight of their opinions; but when they assert that there is no malaria in Boston, New York City and Vienna, I must venture to take issue with them, for I have myself seen the evidences of the malarial poison in all these cities, and the conditions productive of malaria assuredly exist both about and in these cities. That the distinguished gentlemen whom I have just mentioned have not observed the evidences of malaria is but negative testimony. After my report was completed, I had the good fortune to become possessed of McCullough on Malaria, published in 1829, and in this most valuable and interesting work I find recorded many facts which I had already learned in practice, and thought were discoveries of my own. I commend McCullough on Malaria to all who are interested in this momentous question.

From the criticisms which have been made on my views, I find that I have not succeeded in making myself perfectly understood. What I have contended for, and what I have reiterated, is simply this:—*Malaria is the chief source of acute skin disease. Scrofula is the chief source of chronic skin disease. The more inveterate cases of skin disease are often due to the coëxistence of these two things.* The specific exanthems, of course, are not included here, but I contend that their *progress and termination are often largely influenced by the presence of malaria or struma.* I do not claim that malaria or struma are the *sole* causes which produce the dermatoses. Indeed, many of the dermatoses may exist independently of malaria or struma, and most frequently some exciting cause is necessary to develop the cutaneous eruption. Among the exciting causes are irritants, injuries, insufficient or improper ingesta, vicissitudes of temperature, alcohol, dentition, menstruation, parturition, lactation, etc. The proofs of the truth of my views are, in the first place, that the diseases of the skin are cured more certainly and more quickly by the antistrumous remedies on the one hand, and by the antimala-

rial on the other, than can be done by any other line of therapeutics; and in the second place, that careful and painstaking investigation will, in the majority of dermatoses, make apparent the existence of the malaria or the struma as the case may be.

It is a very great, though a very prevalent error, to deny the presence of malaria in every region where intermittent fever is not found. "Malaria does not necessarily produce intermittent; as the pure and simple original ague is rare in many of the most pestiferous portions of Europe; yet no one doubts its existence in those countries." (McCullough.)

In this city, Louisville, in its earlier history, remittent was a most frequent and a very fatal form of fever; now, it is exceedingly rare and never severe or fatal. Pernicious intermittent was once a not uncommon malarial manifestation in this region; now it is almost, if not entirely, unheard of. Shaking agues, genuine chills, were twenty years ago even excessively common, and now-a-days dumb chills or other "masked intermittents" have nearly entirely superseded them. Malaria is beyond question most virulent and rife in the warmer regions of our country; but except possibly in exceedingly circumscribed localities, it will be found to exist from land's end to land's end, and in similar climates in other countries the same I am convinced is equally true.

The ancients were well acquainted with malaria. "Those in Greece who rescued marsh-lands to cultivation were exempted from all taxes and public services; and the very fable of the Lernæan Hydra and the deeds of Hercules, is but the poetical record of a successful operation of this nature." (McCullough.)

In conclusion, I desire to impress upon the reader that my views are not confined to the skin diseases. What produces disease here will produce it in all the other organs of the body. What is true of dermatology is equally true of gynecology and ophthalmology and otology, and it is just as true of the diseases of all the other regions of the body. Acute

leucorrhœa, amenorrhœa and dysmenorrhœa, the acute ophthalmias and otitis, acute cough, neuralgias, diarrhœas and dysenteries, for example, are, according to my experience, more often directly or indirectly caused by malaria than any other cause, and are most satisfactorily managed by quinia and iron.

A general practitioner of medicine myself, I appeal to the general practitioners in the country and in the cities to give these matters careful thought and patient investigation. Bear in mind how little the mere statement of a patient is worth. Interrogate all his organs and functions, and compare his tongue and skin, and expression and pulse, and discharges and sensations, with his assertions; and iterate and reiterate your questions until you are confident the patient is not intentionally or unintentionally deceiving you. Oftentimes your client will assure you that he has no chill or fever, no time of particular drowsiness or irritability, or depression or languor, or thirst or pain, or itching or cough or diarrhœa, and so on; and yet you will find, after profuse questioning, that he has not stated the fact, and that he has some periodical symptom. No figure could so perfectly typify malaria as does the hydra. Its forms, like the hydra's heads, are almost innumerable. Different writers differently estimate the number of heads possessed by the fabled hydra, and so do medical men differ as to the number of forms taken by malaria.

I trust the repetition indulged in in this note may be pardoned, because of its seeming necessity in order to impress my meaning more distinctly.

LOUISVILLE.



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EDITED BY

RICHARD O. COWLING, A. M., M. D.,  
*Professor of Surgical Pathology and Operative Surgery in the University of Louisville,*  
AND

LUNSFORD P. YANDELL, JR., M. D.  
*Professor of Clinical Medicine and Therapeutics, University of Louisville.*

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