SUSCEPTIBILITY TO MALARIA;

OR

Personal Predisposition to Malarial Fevers.

A paper read, at Niagara Falls, during the Thirty-sixth Annual Session of the American Institute of Homœopathy.

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SUSCEPTIBILITY TO MALARIA; OR PERSONAL PREDISPOSITION TO MALARIAL FEVERS.

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After the consideration of malaria and the peculiarities of malarious districts the next ætiological question presented is, as to the kind or condition of persons most subject to malarial influence.

In order that I may be fully understood, and that my argument may be rightly apprehended, I desire to mention briefly my conception of the nature and home of the essential cause of what is known as malarial fevers, more especially the intermittent type. I am compelled to regard it as something organic, propagated in soil or other porous matters that have been for some time occupied by water and then superficially drained and partially desiccated, under an elevated temperature. Plains saturated, and at times inundated with water, in spring and early summer, and then superficially dried during a long and hot season, afford good examples of the birthplace and favorite haunts of malaria. As my associate, Dr. Dowling, has spoken at length and very clearly concerning the nature of malaria and the peculiarities of malarious districts, I proceed without further explanation to consider the kind or condition of persons most likely to fall a prey to its morbific power.

I need not tell you that, from the time men began to write about intermittent fever down to this hour, nearly every author has taught, that *well* people do not take malarial fever —that some sick-making power beside malaria, some *tertium quid* is necessary to produce a case. In common with the

mass of medical men, all over the world, I accepted such teaching and acted upon it for a time. I believed that, of people going into malarious districts those alone took chills and fever who were previously diseased, or who had been subjected to some sick-making power beside the essential or specific local cause. But, after practicing for a number of years in a field where hardly a day passed without my being called on to prescribe for some malarial affection, I was convinced of the fallaciousness of the old teaching.

When placed on this bureau and informed that malarial fevers would be the special subject for consideration, I gladly accepted the task of inquiring as to this very matter. Not wishing to be governed by the views of old authors, nor by the teachings of such new ones as had simply copied from the old, I determined to enter upon an original investigation, to make inquiry from a large and representative number of living and educated practitioners of experience, so as to elicit the fruits of their observations and studies.

I prepared a circular and had it printed, which ran thus:

NASHVILLE, TENN., Oct. 20th, 1882.

DEAR DOCTOR:

To aid in the elucidation of a subject I am writing upon, will you please give me brief answers to the following questions. Do not repeat the questions in connection with the answers, but number each answer to correspond with its question. Please do not delay answering. I shall value your opinion.

Very truly yours, J. P. DAKE.

In malarious districts and in the season of malaria, the exposure being the same, what manner of persons are most subject to, or quickest to take, malarial fevers: (1) The old residents, or the new-comers? (2) Those who are well and quickly responsive to external influences generally, or those ailing from other causes? (3) Those in normal condition, or those under the influence of agents like Cinchona bark? (4) Those of dark, or those of light hair, eyes and complexion? (5) Those of lymphatic, or those of nervous temperament?

Copies of this circular, with a postal card for return of answers, I mailed to one hundred leading practitioners, widely scattered through the United States and located in or near what are known as malarious districts; and I am pleased to say that, more than one-half of the number returned the cards

with answers more or less complete. Some of the circulars, I am satisfied, never reached their intended destination; and, I believe, some of the answers sent were lost on their way to me.

1. In response to question number one, as to whether, in malarious districts and in the season of malaria, old residents, or new-comers, were more subject to, or quicker to take, malarial fever, forty-six said "new-comers;" three said "old residents;" and four were unable to express an opinion. The first of the three who said "old residents," remarked in qualification of his opinion, "I can only answer from brief and vague recollections." The second added, "These answers are not entirely satisfactory to me." The third, and only one making no qualification, I am sure misapprehended what I meant by *new-comers*. I did not mean simply visitors or travelers, but also residents of a few weeks or months, persons who had come in the season of malaria.

I consider the opinions of the profession in this country as practically harmonious, that persons coming from salubrious regions into malarious districts are more quickly stricken with malarial fevers, especially with the intermittent, than are persons who have resided in such districts for a series of years. The exposure being equal, the new-comer, unacclimated, is less tolerant of malaria than is the older resident, and more quickly responds to its morbific impression. My inquiry, relating to both classes, of course, has contemplated persons not already sick from the malaria of a previous year. It is well known that every malarious region has but a limited annual season of malarial activity, and that such season, in different years, is not always equally severe. Families sometimes reside in such a region for several successive years without a single member having a chill; and then a summer may come prostrating all at once with intermittent fever. But I need not dwell on this point.

2. In response to inquiry number two there was less unanimity. The teachings of old writers, as already mentioned, a lack of due reflection and a possible misunderstanding of my question, led to a diversity of expressions. The question was,

"in malarious districts and in the season of malaria, the exposure being the same, which are more subject to, or quicker to take, malarial fevers, those who are well and quickly responsive to external influences generally, or those ailing from other causes?" Twenty-six correspondents said, "the well;" twenty-three said, "the sick;" while several could not express an opinion. Of the twenty-three who said, "the sick;" twelve qualified the opinion more or less by pleading a want of experience or of critical observation, or by stating conditions calculated to modify the cases considered.

I am persuaded that had I stated the question more fully, the number who said "the sick," would have been very considerably reduced.

In using the term, "sick from other causes," I did not mean those who, during exposure to malaria and after its reception in the system, were "over-worked," or "under-fed," or "wrongly fed," or "illy housed," or reduced in tone and vigor from other like causes. I had reference to the personal condition *before* entering malarious districts, *before* exposure to malaria and, especially before its reception. I was considering the conditions of persons, as affecting their *susceptibility* to malaria, and not as leading to the *development* of its effects when already in possession. Predisposition is one thing, and an exciting cause is quite another; and I am satisfied some of my correspondents failed to recognize the distinction.

3. With this explanation I pass on to the third question, as to whether persons in "normal condition, or those under the influence of agents like Cinchona bark," were more likely to take malarial fevers. The answers to this question developed a diversity of opinions. Thirty-two correspondents said, "those in normal condition;" fourteen said, "those under drug influence," while four could not answer definitely.

I should here mention that, of the medical men to whom my circular was addressed, and from whom responses came, about one-third were of the old school.

My particular object in asking this third question was not explained, and so each correspondent put his own construction

upon it and made answer accordingly. Some believed I was seeking proof of the prophylactic power of Cinchona; some that I wished to discredit preventive measures; and not a few that I was aiming to bolster up the practice of dosing heavily with Quinine all persons residing or traveling in malarious districts. My leading object was simply to draw light upon the question as to whether the human organism, in its normal state is more susceptible, or less, to malaria, than when in an abnormal state from any cause whatever. The prophylactic idea was only incidental. It is curious to note that all my correspondents who considered the susceptibility increased by drug influence, especially by Cinchona and its analogues, were of the new school, except one. I can account for such an answer from a believer in *similia*, only upon the supposition, that he thought I referred to massive doses of drugs, very exciting and exhausting doses, such as would ultimately diminish and not increase the power of vital resistance in the organism.

4. In regard to my fourth question, as to whether persons of dark hair, eyes and complexion, or those of light, are more susceptible to malaria, a variety of opinions came. Twenty-four correspondents said, "light;" fourteen said "dark;" and thirteen said they observed no difference. Some of the answers might have been otherwise had it been understood by all that I had reference to persons of the white race alone.

5. In the comparison of lymphatic and nervous temperaments, as to predisposition to malarial fevers, the profession is nearly equally divided. Twenty-one correspondents considered persons of lymphatic temperament more susceptible, twenty awarded that character to the nervous, while ten were undecided.

With regard to temperaments, as well as constitution in general, as embraced in my present inquiry, I have nothing farther to add. Since persons of all temperaments and occupations and habits, going into malarious districts are, more or less, subject to malarial fevers, I see no practical good in seeking for the minor differences at present.

ARGUMENT.

I now come to the statement of my main proposition and the consideration of its proofs.

In malarious districts and in the season of malaria, persons previously in a normal condition, apparently well, are the first to take in malaria, so as, generally, to furnish typical cases of malarial fevers.

1. The first proof, to which I call attention, is the almost universally admitted fact that, among the residents of a malarious district, during the prevalence of malaria, the fresh comers are more likely to have chills and fever, and of a pronounced character, than are the old residents. This fact can be accounted for upon no theory except that, the fresh comers are in a more normal and, therefore, more susceptible state. It has been observed that some persons escape chills, in such regions, during their first year's residence, taking them severely during the second year; but such cases are exceptional, and due to peculiarities of personal habits or of seasons.

2. The second proof is seen in the fact that, residents of of malarious districts, not in good health, but having no chills or fever, on going to a cooler region and into an atmosphere entirely clear of miasmatic taint, and becoming otherwise well, often develop chills and fever there. The germs taken into the system, in such cases, have been kept dormant by preoccupying morbific causes, by a method, I would remark, analogous to that noticed in newly-cleared land, where an entirely new species of timber is seen to spring up upon the removal of the old.

3. The third proof comes in the fact that, residents of malarious districts, having had no chills but being otherwise sick and broken down in health, after travel and change in another climate, and full recovery, on returning fall an easy prey to malaria. This fact I have often noted, and am sure it is not unfamiliar to those favored with opportunities for observation in this direction. In my own person I have had a severe demonstration of its reality. In the spring of 1881, being worn down, and dyspeptic and nervous, though having no chills or fever, I went across the sea, traveled in Wales, Eng-

land, Denmark, and farther north, and returned home well and strong in September, during a long spell of dry, hot weather, and just when the street in front of my house was torn up for the laying of a large water main. A few weeks after my arrival at home, I was prostrated with malarial fever, "typho-malarial," as some choose to call it, and came near losing my life.

4. The fourth proof is furnished in the fact, attested by nearly all of my correspondents, that persons under drug influence, especially Cinchona bark and its analogues, are less liable to chills and fever than persons in a normal state, the exposure to malaria being the same. The drug influence, preoccupying the ground, is preventive to a good degree. Where Cinchona bark, Quinine, Eupatorium and analogous drugs are used excessively, there may be cases where they will not only fail to be prophylactic, but where they may seem, even, to predispose to fevers.

It is not my purpose, here, to enter upon the subject of prophylaxis in malarial fevers—it would be foreign to my present purpose—and, yet, a practical hint, as to the value of such a measure, must be noted.

5. The fifth proof comes from the fact, that two similar morbific causes are not operative in the human system at one time, the more positive and powerful, the first to gain headway and control absorbing and terminating the less powerful and positive. It may be thought by some that this fact is itself in need of proof; but I consider it so fully established as to warrant its assertion and use here, leaving the burden of counter-proof upon those who may venture to deny it. Upon this fact all prophylaxis is based.

6. The sixth proof is furnished by the fact, already shadowed forth (2), that two dissimilar morbific causes seldom manifest their presence actively in an organism at the same time, because the stronger, or the one first in possession, suspends or obscures the weaker during the period of its own activity, without, however, breaking its hold or preventing its subsequent progress. Examples of this suspension or obscura-

tion of dissimilar affections are not uncommon in the experience of all physicians. I know there are some seeming exceptions to this rule in what are termed "complications of diseases," "hybrid affections," etc.

It is not uncommon to find an intermittent character stamped upon cases of disease bearing various nosological designations; but closer inquiry will ultimately show that in most, if not all of them, not only the intermittent character but, also, the essential pathological state, has been due to malaria. The determination of matters like this must linger till the mists beclouding the domain of ætiology are yet farther dissipated by the lights of direct and earnest inquiry.

7. The seventh proof is furnished by analogy from the experience of the farmer, who finds the reception and germination and fruitage of the seed he scatters more ready and abundant when the field is not occupied by other seeds and other vegetation. The human system in health is not unlike the virgin soil, clear of weeds and briars, and whatever else claims room and sustenance; and the germs which occasion disease are not unlike the seed the farmer sows. The law that makes the one do better, germinate more quickly and grow more luxuriantly in a clear, unoccupied field, makes the other take hold of the organism and work more vigorously when its tissues are unoccupied by other claimants.

I might further extend the proofs of the proposition with which I started; but it seems to me unnecessary. The farther I have gone in research and the more I have reflected upon facts observed, the less confidence I have had in the old teachings as to personal susceptibility to malaria. I am really surprised that writers have so long copied false views and mischievous teachings, one from another, on this subject.

In closing, I would remark that error here is not simply one of theory or of philosophy—it is also an error of practice. If the old views are correct all rational prophylaxis goes for nothing; and in treatment the practitioner must forever hunt for symptoms of the *tertium quid*, in order that his remedies may vanquish *it*, before grappling successfully with the

malaria. If my view is correct, my proposition sustained, there is much in prophylaxis, and a more direct and satisfactory therapeutic road is open to the practitioner. Studying the home and habits of malaria as he studies noxious plants and animals—judging the unseen by the seen—he may learn much of prevention; and studying the symptoms of malaria in the human body as he studies the symptoms of any other specific and material cause of disease, he may hope to arrive at the few therapeutic agents capable of affording satisfactory relief.

The idea that, the treatment of malarial fevers, especially the intermittent type, in each case, calls for the consideration of the hundred *other causes* that may seem to have predisposed the patient to chills and fever, before a remedy is applied, may suit some practitioners, and some localities, but it will not do where malaria abounds, and chills shake, and congestions come, and death raps loudly at the door.

I am not forgetful of the value of individualization in the study and treatment of human maladies. I have long been a faithful individualizer. But I believe there is such a thing as an accumulation of medical facts, calling for a correct generalization. And I hold that he, who does not generalize the facts, supplied by study and experience, spends his time as uselessly in medicine, as he who counts the grains of sand on the ocean beach, from year to year, thinking thereby to master the science of geology.

A half dozen remedies we have, capable of vanquishing malaria in the human organism, in a large majority of cases; and as these fail the necessity for closer individualization appears.

Remembering the unity of the cause and the general uniformity of manifestations in malarial fevers, let us follow the pointings of our therapeutic law to such means as may cure *cito, tuto et jucunde.*