

must needs then, in my opinion, express the state of saturation of the atmosphere by the swamp microbe, thus permitting to man a greater absorption, in due time, of the morbid principle, hence the very serious character of the symptoms presented. Considering that the two morbid entities co-exist in the same zone and increase in direct ratio of the development of the malarious germ, —a fact largely observed at Rio de Janeiro where yellow fever is a contemporary and a companion to the excavations, breaking out at the same time that these are effected, and following them in their way through the city: considering, besides, that yellow fever has no distinct characteristics of its own—the symptoms that are ascribed to it being strictly the same that I have observed in serious cases of acute malaria, hæmorrhage, and black vomit included; considering, moreover, and this argument is of surprising value, that morphologically the element considered as productive of yellow fever as shown by Dr. Domingos Freire, is strictly the same that I have met with in the blood, vomit and urine of patients suffering from acute and chronic malaria; considering, likewise, that this very same element has been found by myself in the water that is used for drinking by the inhabitants of places where malaria reigns endemically—places where yellow fever is not even spoken of—an argument that at one time enlightens the etiology of malaria, and overthrows the objections of those who ascribe to pigmental alterations of the hematine, the elements described by Laveron and confirmed by myself; considering, finally, that all the cases of malaria that could have been, and those that were classified as yellow fever, and were attended by me, yielded to the specific treatment of acute malaria—unsuccess in those in which this treatment is employed, being due, in my opinion, to insufficient doses, bad quality of the medicine used, or tardy interference, when the organism is no longer in a state to absorb it, or because the disease is several days old, or lastly, because the attack has been so violent as to cause the same deep disorders that in milder cases would take time to make their appearance. I have come to the conclusion that yellow fever is a graver modality of acute malaria, its superlative gravity; that, therefore, it is not an idiopathic morbid entity, as has been asserted until now, but the expression of gravity in another morbid state, and that the name yellow fever

should be changed to that of grave malaria, this qualification serving to designate the highest intensity of malaria.

Amongst the objections that can be made to these doctrines, objections that have already been presented to me, the one that seems most weighty is the following: "Yellow fever cannot be of the same nature as malaria, since the first is contagious and the second is not." This is a great mistake. In the first place, no one, to my knowledge, has been able to demonstrate the contagiousness of yellow fever, that is the transmissibility of the disease from body to body, by contact; in the second place, because malaria is susceptible of being transmitted by any individual to persons surrounding him, as well as of being transported to great distances. For instance: An individual is poisoned by the helococcus, and retires to his rooms, where he remains for several days without appropriate medication. The helococcus, not being consequently attached, and finding in the organism of the patient a favorable field for its development, proceeds on its evolutionary march. The patient, though whose ennuatory apparatus works, discharges continually from his body a certain quantity of these microbes that are thrown into the surrounding air, where, if they meet with favorable conditions of vitality, they live, develop and procreate. Therefore, after a certain time the rooms of this individual will be transformed into a genuine focus or nursery of helococci, and consequently whoever enters there may receive the same morbid element that is found in a marsh or swamp.

Here we have the explanation of the contagiousness of yellow fever, because it is at the same time the explanation of the contagiousness of malaria, a question that has been despised, why I cannot tell, when it is a known fact, as no one dares to deny, that malaria is a microbiotic disease. Thus, an individual that has been infected in a marsh, may, in turn, constitute another marsh focus or nursery as long as his organism affords to the helococcus the necessary conditions for its development and procreation. And if such a case is liable to happen in reference to one single indi-

(1) Έγος, swamp, marsh and κόκκος, in Latin *coccus*, *coccum*, a germ, a seed, a small round body. This denomination created by myself to designate the microbe of malaria, is based on the rules established by Egger for the construction of neologisms.