

other a drink of water. All this is now changed and we rarely if ever see a case of shaking ague, but have instead chill fever or dumb ague, intermittents, neuralgia, diarrhoea, dysentery, malarial coughs, lassitude, anæmia, heart murmurs, albumen and oedema, simulating Bright's disease, hæmaturia, enlarged spleen, rheumatic pains, and congestions of nearly all the organs, besides many other affections obscure in their nature but undoubtedly due to malarial organisms. Now, how is this change in the type of malaria to be accounted for. For nearly thirty years I have been a close observer of the changes that have taken place in the forms of malarial diseases that are endemic to this section, as well as of the climatic influences which effect the character of this poison, and to my mind there are three reasons for this change: The first and chief one is better drainage; the second is the forests have been cut down and the country cleared up lessening the amount of organic decomposition, and the third one is that nearly all the virgin soil has been cultivated over and over again, thus liberating and getting rid of nearly all the organic matter that had been for years accumulating and stored up under the sod. I said I would try and explain why dysentery should be produced by malaria after vegetable decomposition had ceased, and will now endeavour to do so. My explanation is this, continued exposure to malaria engenders a cachætic state of the system by reducing the globular richness of the blood, perverting the nutritive processes of the tissues and impairing the vital resistance of the nervous system, thus rendering its victims especially liable to attacks of specific febrile diseases and to splenic, hepatic intestinal and other local congestions; one of the structures most liable to be affected is the mucous lining of the intestinal canal. Taking then the perverted state of the blood and tissues, the congested condition of the intestines together with the malarial germs infesting the canal undergoing

changes by fermentation, and acting locally on the mucous lining as well as constitutionally through the blood and we have made plain the reason why dysentery follows continued exposure to malarial influences, and why the mortality from this disease at such a time is far above what it would be if the malarial element had not existed. We hear and read of typho-malarial fever. Now, I do not believe there is any such disease, and the name is a misnomer.

A person may have malarial organisms in the system and at the same time be attacked with enteric fever, as a consequence there may be and often is a chill followed by a greater rise in temperature, and then a remission but never an intermission. On examining the blood of such a patient the plasmodium will likely be found. By giving a few good doses of quinine the chill is arrested but the fever goes on and runs its regular course. Again, a person living in a malarious district having typhoid, and when convalescing may be attacked with malaria owing to the perverted condition of the blood and impaired state of the nervous system due to the long illness and after the enteric fever proper has run its course, but in neither of these cases can this be properly called typho-malarial fever. The bacillus of typhoid and the organism of malaria are separate and distinct poisons, and are not produced from the same causes although they enter the body by the same channels. But it has yet to be proved that the germ that produces malaria will cause typhoid, or that the bacillus that attacks the mesenteric glands and peyer's patches will induce malaria in any form, and I think the sooner we recognize this fact the better.

My observations have taught me that if we have a continued form of fever withstanding quinine and mild laxatives lasting over seven or ten days we are safe in pronouncing it typhoid, and just here let me say that the examination of the blood corpuscles in this class of cases is one of the most