

18. *Urine of Intermittent Fever.*—Surgeon EDW. NICHOLSON gives (*Madras Quarterly Journal*, July, 1863) an account of some investigations on the state of the urine in intermittent fever. His observations show that in that disease there is a great increase in the water, the urea, and the chloride of sodium. “During the cold and hot stages,” he says, “the urea is nearly doubled, and the chloride of sodium is increased to five times the normal amount.”

“The increase of urea is common to all febrile diseases, and the remarkable increase of water and of chlorine has often been noticed. The principal points to which I would direct attention, as bearing both on physiology and on the pathology of ague, are the disappearance of uric acid during the whole of the day, and the remarkable decrease in the amount of phosphoric acid.”

“The history of uric acid is not yet sufficiently complete for me to hazard any conjectures as to the cause of its disappearance.”

“But what is especially worthy of attention is the diminution of the phosphoric acid to *one-eighth* of its normal amount, an amount which is not capricious or dependent on accidental circumstances like that of uric acid, but is regular, caused by well-defined and well-studied actions in the human body, and can be deduced from the weight of body, amount of food, work performed physical and mental.”

“The phosphoric acid in the urine proceeds from three sources, metamorphosis of osseous tissue, of muscular tissue, and of nervous tissue. Many considerations, amongst which is the great dependence of the amount of phosphoric acid excreted on the work performed by the nervous system, lead to the generally received conclusion that by far the greater part of the phosphoric acid proceeds from the metamorphosis of nervous tissue.”

“Proceeding then, as phosphoric acid does, from the metamorphosis of nervous tissue, does not the diminution of phosphoric acid in the urine of ague, show that the disease is characterized by a depression, amounting nearly to paralysis, of some parts of the nervous system? I do not wish to enter too far into theoretical considerations, as those notes are rather intended as ‘memoirs to serve for the history’ of ague, than as proposing a pathological theory. Without being a *chimiatre*, I believe that chemistry and therapeutics are often the best basis for pathological research, and I would observe that the pathology of the urine of ague, the cachexia, often mental as well as physical, consequent on malarious disease, and the class of remedies employed in this disease, all point to a paralysis of some parts of the nervous system. All the remedies used in ague belong to the stimulant section of the class *Neurotica*—wine, ammonia, zinc, chalybeates, arsenic, quinine, the vegetable bitters, coffee, and perhaps tannin.”

“Quinine has for the present dethroned arsenic and chalybeates from their high position in the treatment of ague, although they still continue to be the best remedies in chorea and neuralgia. The *modus operandi* of quinine in ague seems to be its power of augmenting the vital energy of the nervous system, and of enabling it to react against the paralyzing effect of malaria. This property is shared, in a greater or lesser degree, by most of the stimulant neurotics, especially by zinc, iron, and arsenic; the remedial action of these medicines in chorea is clearly to give the nervous system energy to react against the disease and restore the muscles to a proper state of subordination.”

19. *Pulmonary Congestion in Children, simulating the Early Stage of Phthisis.*—In a lecture delivered at the Hôpital des Enfants Malades, M. BOUCHUT summed up his remarks in the following conclusions:—

There are cases of chronic pulmonary congestion which perfectly resemble, in their physical signs, tubercle of the lungs in its first or crude stage. These congestions are asthenic, and are readily cured by the use of sulphureous waters; while true tuberculosis is much less amenable to this treatment.

Chronic pulmonary congestion is observed in children as well as in adults; it

¹ I may also mention that I have been informed on the best authority, that albumen prepared in a state of purity by Professor Graham's process of dialysis, does not contain phosphorus.