

What might be termed the nervo-chemical theory—a theory that would result from a combination of the views of Claude Bernard and Pavy—the former holding in general terms, that the process of sugar-formation in the liver is governed and regulated by the nervous system; the latter holding that the hydro-carbons of the food are stored up in the liver in the form of glycogen, and that under certain abnormal conditions the glycogen is converted into sugar, thus producing diabetes; this composite theory has, I say, received an able advocate in the person of P. W. Latham, A.M., M.D., F.R.C.P., of Cambridge, Eng. In the Croonian Lectures delivered by him at the R.C.P.L., April, 1886, he classes Rheumatism, Gout, and Diabetes in the same category, and ably argues that the whole cause of the incomplete metabolism diabetes, results from an imperfect condition of the vaso-motor system of nerves.

With your permission, I will quote some of his statements; but I can make use of *only some* of them, as they are too elaborately exemplified by abstruse chemical formulæ to make many of them available in a paper like this. He says: "It remains for me to say a very few words with regard to the pathology of diabetes, and to explain plain why I have classed it together with gout and rheumatism.

"If the function of the liver be interfered with, so that there is imperfect metabolism of glucose as it passes through the organ, this would be a satisfactory explanation of the origin of the disease, and we should expect in such cases that the urgency of some of the symptoms would be lessened by careful diet, and abstention from saccharine and starchy food.

"But there are other cases in which the diet seems to have much less effect in controlling the symptoms; it is this form that I wish briefly to discuss." "I have endeavored to show," he says, "that in acute rheumatism, by the separation of the cyan-alcohols from the rest of the albuminous chain, we have glycocine, and glycollic and lactic acids formed; the glycollic acid being oxidized into CO₂ and water, the lactic acid in some measure being oxidized into these products, and in some measure passing off by the skin.

"But suppose that whilst the vaso-motor fibres of the muscular nerve are paralyzed and the ves-

sels dilated, the molecules of a cyan-alcohol are detached and hydrated into glycollic acid but only partially oxidized, the result would be that the glycollic acid would be transformed into carbonic acid and methyl-aldehyde and water. "Condensation of six molecules of the aldehyde may then take place, as it does in plants, and form *glucose*." He then continues to show how, when the vaso-motor nerves are in a certain paralyzed condition, we may get the formation of not only glucose, but paraldehyde, a hypnotic, oxybutyric acid, and acetone; but the steps of his reasoning are so abstruse and his chemical formulæ so complex, that it would be worse than useless to attempt at this time to follow him. In his conclusion he says: "I have thus endeavored to indicate some of the changes in the nervous system, the blood, and the tissues, which may take place in diabetes, rheumatism and gout. . . ." "The inferences may be wrong, but the facts remain; and I trust that in this way, at least, I have helped to a better understanding of these disorders."

It would be quite superfluous for me to say anything about the long train of symptoms that accompany this disease, or to point out the various methods of testing the urine, for I am not lecturing to students, and you all know these as well as, and perhaps much better than I do. I will pass on to the treatment which I have, I may say, experimented with, and to the methods of treatment which I have seen recommended or used by others. In doing this, permit me to arrange in clinical form the few cases that I shall bring before you, which arrangement, although more cumbersome, is better fitted to exhibit the various points in them which seem worthy of remark.

First Case. A young man æt. 27, a carpenter by trade, had suffered from diabetes about 9 months, when I was called to see him. The quantity of urine voided was then growing less, becoming darker in color, and beginning to deposit a sediment on standing. He was greatly emaciated, pulse feeble, had hectic cough and extreme dryness of the mouth; his tongue was cracked, and his teeth and lips were incrustated by dark sordes. About three days after my first visit to him, coma supervened, and gradually grew more profound until it terminated in death on the third day afterwards. It was too late for the action of any