

strongly of the volatile fatty acid of cod-liver oil; and, moreover, that the solid constituents of the blood were observed to be of a very large amount.

So far so good—both theory and practice agree, but it appears to me that no cure can be expected from such a class of agents. They, no doubt, preserve the body from being so rapidly burnt up, but this is all we can possibly expect them to do. We do not get at the root of the evil, or at what is the primary cause of the tubercular deposit. Now, if the tubercle be protein, with a deficiency of carbon, there appears to be some reason for supposing, that in this peculiar diathesis the elements of organism do not adhere together with that degree of tenacity which constitutes normal health. Liebig says there is nothing to prevent us from considering the vital force as a peculiar property, which is possessed of certain natural bodies, and that this force is continually being opposed to the organism by a chemical force; and by the action of this chemical force, a separation of part of the body, in the form of lifeless compounds, begins; and if, from any cause whatever, the resistance of the vital force diminishes in a living part, the change of matter increases in an equal degree. In the vegetable kingdom, the resistance of the vital force is sometimes shown very powerfully, when we perceive leaves charged with turpentine or tannic acid resisting the affinity of oxygen for these compounds. On the other hand, when this force is lessened in the organism, we need not be surprised at great abnormal changes necessarily occurring. Again, the same author observes that the absorption of oxygen occurs only when the vital force of living parts is weaker than the chemical action, and that animal life may be viewed as determined by the mutual action of opposed forces, that the increase of the body is effected by the vital force, and the waste of the body by the chemical action of oxygen: and that the condition of the body which is called health, results from an equilibrium among all causes of waste and of supply. Now, I think we have evidence that, in this peculiar condition, the carbon of the body is too easily acted upon by the atmospheric oxygen, and therefore, that the balancing operation which takes place in the transformation of protein into carbonic acid, urea, water, &c., which constitutes health, is so far overturned, that a larger quantity of carbon is removed in proportion to the amount of nitrogen and hydrogen, which, in the healthy functions, are carried away by the kidneys, liver, skin, &c.; hence these latter elements, not being taken away by their proper emunctories, combine in certain definite proportions, and constitute the deposit known by the term tubercle.

In seeking, therefore, to discover a remedy for this disease, our object ought to be to ascertain whether there are any agents dietetic or medical which could prevent this too quick transformation. In making this inquiry, we must first observe, there can be no question that the victims of this disease are chiefly taken from amongst that class of individuals whose general tone of system is lowered, as occurs among the pampered and over-protected children of fortune, or in those living in confined and unhealthy atmospheres, &c. &c. A remarkable fact exists, strange as it may appear, that in consumptive families the most dissipated and irregular in their habits, and those who have habitually exposed themselves to many of the causes able to engender this diathesis, have yet frequently enjoyed longevity; whereas, in the same families, the most virtuous, and those who have guarded their lives with the greatest care and prudence, have fallen early victims. Hence, it is an interesting matter to ascertain how far alcoholic drinks in this disease preserve those constitutionally predisposed from these fearful results. I think it is agreed that alcohol, like all other highly carbonized substances, does supply a certain amount of pabulum of the blood. Now, does it act in any other way? Does it at all prevent that disposition to oxidation on the part of the organism of which we have spoken, and thus by making the protein compounds less ready to combine with oxygen, render them less ready to be broken up? That it has this property out of the body is very evident, and may it not have an equal power when taken internally? There can be little doubt the alcohol is taken up and circulated in the system,