

sides these changes among its own constituents in regard to proportions and to qualities, the blood is the great sewer, if I may so speak, through which the drainage of the body is effected. It is, moreover, liable to receive poisonous contaminations from without the body, introduced in a variety of ways. In these different modes, then, the condition of the blood may be altered, and origin will be given to the so-called blood diseases; the number of which seems rapidly increasing, as for instance, in the lectures of Dr. Todd we find alterations in the blood assigned as the cause of those derangements which seem most to favor the notions of the solidists, and depend upon the condition of the moving fibre, viz, Spasmodic diseases.

The blood then, you perceive, is liable to alterations, which, by calling in the aid of chemical manipulation, may be ascertained, and lead to the application of remedies more appropriate than could otherwise be applied. It is true that this field of investigation has been opened so recently that great results have not yet been effected, but they loom in the distance inviting us by their magnitude to carry forward the work with energy and perseverance. Discoveries in this field are not unfrequent, promising abundant fruit to future investigation, and probably leading to most satisfactory conclusions both as to pathology and practice. Take as an example the recent discovery by Bernard of a normal function in the liver, not before suspected, the conversion of a portion of food into sugar. That eminent chemico-physiologist by analysing the blood entering the liver and that emerging from it as well as the substance of the liver itself, has proved that in health, sugar is constantly produced, recognizable in the blood till it has passed the pulmonary circulation, after which, in the normal state, it is no longer to be found.

Do you not at once see one of the direct practical bearings of this new fact? Will it not serve to clear up the great obscurity which has long hung over the very fatal disease called diabetes, and not only tend to elucidate its nature but by fixing on the precise points where the hitherto considered abnormal material of sugar is produced, and the point where normally it disappears, enable us to ascertain what the precise change is which prevents its disappearance at that point, and allows it still to circulate with the blood; and when that change is recognized may we not expect to be able to apply with effect remedies suited for the case?

The practical importance of knowing the chemical state of the blood is now recognized even in the nomenclature which is being introduced to designate its condition. Such terms as *spanæmia*, *uræmia*, *pyæmia*, *toxicæmia*, &c., with the even more analytical names of *hypinosis* and *hyperinosis* serve to shew the direction which the inquiries of patholo-