

gists are taking. I might also call you to survey the new views taken of the pathology of gout and rheumatism, as well as the whole tribe of zymotic diseases, as a reason for not neglecting chemical pathology, but I shall confine myself in this connexion to asking your attention to the glimmer of light which has been thrown upon the nature and prevention of Tubercle, that scourge of humanity under the form of consumption, and other allied maladies. This is conceded to be a blood disease, and seems to arise from deficient elaboration of the nutrient particles poured into the blood, and intended to be there developed into the nourishing material of the body, but in some hitherto unknown way perverted into the tubercular deposit. Recently observed facts, aided by minute chemical and microscopical research seem to point to over abundance in the supply of oxygen to the blood as a cause of the development of tubercle, while its prevention, if not cure, would seem to have some relation to the diminished arterialization of the blood.

But I must not omit to point out what may seem plainer evidence of the practical importance of chemical knowledge, viz., the direct administration of medicines to produce certain chemical changes. You are, of course familiar with the class of remedies which act entirely on chemical principles. They bear a part, indeed, in the classifications of *materia medica*—the antacids, the lithontriptics, the antidotes have always been known to act, not as vital but as chemical agents, and they have long been, and still continue, in use to remedy what I may call the grosser chemical diseases of the body. But the recognition of the blood-origin of diseases, and the investigation into the precise changes which constitute them, or, in other words, form their "proximate causes," will lead, and has already led to the search after remedies which have the power of altering these conditions. Many remedies which now we employ empirically, or which are called specifics, we shall probably come to use in order to fulfil precise indications, and to induce particular changes. You all know how useful the tartrate of antimony is in inflammation of the pulmonary tissue. It is generally used, but its mode of action is also generally unknown. But when you hear that it has been ascertained by chemical experiment that antimony is potent in diminishing the quantity of fibrin in the blood, you will feel more satisfied in prescribing it, than if you gave it empirically as an agent which you had found to be useful. So, again, in regard to nitrate of potash, which has been given in large doses as a remedy for rheumatism: it is a powerful solvent of fibrin, and we know that in rheumatism that element of the blood is largely increased. The effects of iron in augmenting the red corpuscles become evident by the pallor of disease giving way to the roseate of health.