

devious wanderings of drugs from the stomach to the remotest organs of the body. Chemical analysis has traced the transformation of food into various forms of force, such as motion, heat and thought. Materia medica has been made rational and effective, by cleansing it of hundreds of its filthy compounds and useless formulæ and superstitions, and by adding to it numerous agents that botany and chemistry have discovered. Through the study of bacteriology, and the practical knowledge obtained of the effects of micro-organisms in the production of disease, the practice of surgery has been regenerated, and medicine has received a stimulus, the great effects of which it will be difficult to foretell. The adaptation of electricity to lighting purposes has assisted in illuminating portions of the body; while the Röntgen rays has rendered visible to the eye the deepest or most obscure structures with a degree of accuracy that can scarcely be appreciated by those who have not had an opportunity of witnessing the effects of its penetrating powers.

This increased knowledge has led to increased power to cope with disease, as may be shown in detail by pointing to the practical extinction of small-pox and typhus fever, to the success in keeping cholera at bay, to the enormous reduction in the mortality following the performance of major surgical operations, and finally to the fact that during the reign of our late beloved Queen the average duration of life has been increased by three and one half years.

Though every branch of medicine has felt the stimulus of the nineteenth century progress, in none have transformations been so great, or success so signal, or the progress made so evident as in surgery. Into a few of these it may not be uninteresting to look.

*Amputations.* At the present time, when the success following amputations is so great, and when one scarcely ever sees a person die as the result of the operation, unless performed when the patient is *in extremis* from injury or disease, it can scarcely be credited how such surgery was looked upon by our forefathers. A prominent Prussian surgeon advocated doing away with amputations altogether as a method of treatment. Mons. Tisot wrote a monograph "*Sur l'inutilité de l'amputation des membres*" in which he set aside the operation as useless, speaks of it in the