

the ganglia of the spinal cord, lastly, it extends to the ganglia cells of the heart. The researches of Dr. Richardson, based upon the suggestion of Liibreich, and the practical experience of the medical profession respecting its use, illustrate what may be expected from a higher pathological chemistry.

When we contrast medical practice at the present day with what it was sixty years ago, it must be acknowledged that the modern practitioner is greatly assisted by the late improvements in the means of *physical diagnosis*. By it he endeavours to discover during life, that which was formerly revealed only by the scalpel after death.

A *perfect* diagnosis cannot be arrived at, till we have an exhaustive pathology—for without a knowledge of what is *possible* in disease, diagnosis must be defective. Moreover, that which might be considered a pathological fact to-day, by changing circumstances may be proved erroneous to-morrow. Therefore, in the present state of our knowledge, we must be guided by the *probable* in disease. That experience which is able to anticipate causes, and from causes their effects, often enables the practitioner, as by prophetic insight, to diagnosticate conditions which neither direct physical examination nor the most systematic arrangement of symptoms would explain.

But, as already stated, modern invention and research have greatly contributed towards determining the true nature, and consequently in fixing more accurately the true treatment in different diseases; as, for example, Laennec and a host of subsequent observers have taught us how to map out the condition of internal parts, the action of which we hear, but cannot see. Czermak and others, by the application of optical instruments, have exposed to view organs of the body before inscrutable; the pharynx, the vocal cords, the trachea, the vagina, the uterus, the bladder, &c.; so that many of the hidden causes of disease are no longer a matter of conjecture, but of sight and demonstration.

The ingenuity of Helmholtz has disclosed the secrets of the eye; and it is not asserting too much to say that the *ophthalmoscope* has done more to increase our knowledge of diseases of that organ than has been accomplished during a century by all other means; and that the oculist can point to brilliant triumphs over diseases hitherto deemed incurable; and he is not now obliged to class a number of deep-seated diseases of the eye under the head of amaurosis—to which the remark of Walther is so applicable—"a condition where the patient sees nothing, and the doctor also—nothing." The ophthalmoscope also teaches us that some states of the eye are pathognomonic of suspected conditions of other parts of the body.