

research, and one most fruitful of important practical results; we can say that the progress made in its cultivation has been of late years extremely satisfactory. And yet it must be stated with emphasis, that we only stand at the beginning of a successful development of the subject, and that an extremely large amount of work remains to be done." When we examine a portion of the spinal cord, we detect in it nothing suggestive of its functions, as we do in some other organs of the body—apparently a homogeneous, inert mass; but physiologists have discovered and proved that it is not only the medium for transmission, but also centres assisting in originating the important and delicate functions of sensation and motion. They have also succeeded in assigning to each particular part of the cord its special function, and it is necessary to an intelligent apprehension of the diseases affecting the spinal cord, that the physician should have a somewhat clear idea of the complicated functions which it performs with such inimitable regularity. I know of nothing in nature more beautifully illustrative of design than the co-ordination of muscular action, when opposing forces act and react upon each other in the performance of intricate movements, and with such unerring precision that, in health, we are unconscious of their existence. There is not a movement of the body but is more or less due to nervous control. The sensations of pain, temperature, functions of absorption, secretion, excretion, and assimilation are all depending on the integrity of nervous force and action. The diseases connected with the cord, as might be inferred from that circumstance, are very numerous. So almost universally does nervous influence enter as a factor into the cause of most diseases, that medical diagnosis might be reduced, as chemistry is threatened to be, into one element; and should we happen to be in doubt (*which of course seldom happens*) we might conclude like some patients, when asked what is the matter? reply, "I think, sir, it is the nerves."

Since Sir Charles Bell, in 1811, published his celebrated little pamphlet, "An idea of the New Anatomy of the Brain," many excellent works have been written on the subject. It is impossible to do more in a short paper, than refer to a few of them. From those I have had the pleasure of consulting, I have gathered this fact, that very many of the symptoms of diseases—whether re-

ferable to the cord or other organs of the body, and often simulating organic lesions—are, in reality, the result of functional disease of the cord, and caused by reflex action, deficiency of quantity or depravation of quality of the blood for its nourishment and repair; and usually characterized by tenderness in one or more points of the spine. It is not difficult to understand that undue exhaustion of the cord without an equivalent of repair, would be followed by the impaired performance of the functions of sensation and motion, and manifested by pain or spasm—pain being the usual signal of alarm by which mischief in other parts of the body is made known. We find the analogy of the effect of deficiency of blood in the cord, in the cerebral symptoms which follow ligation of the cerebral arteries. Authors are agreed that many of the protean manifestations of hysteria are due to spinal irritation, but there does not seem to be much unanimity amongst them in reference to a name for this peculiar condition of the cord, as will be shown by the following quotations. Dr. Turk, of Vienna, in an article in the *British & Foreign Medical Review*, speaks of "spinal irritation" as a purely functional derangement of the nervous system; calls it "neuræmia," and gives the cause as reflex action from diseased viscera, some depravation influencing the ganglia of the posterior roots, or some morbid condition of blood circulating through the central axis. Sir James Paget, in an article in *Brithwaite*, discourses at some length on what he designates "nervous mimicry" of diseases of the spine; a class of cases often very puzzling to the physician. R. B. Todd, in the *London Lancet*, writes on "local hysteria," which he regards as "reflected nervous phenomena," and speaks of the very common symptom of pain immediately under the left breast, which in his opinion may almost invariably be attributed to a debilitating cause, as leucorrhœa, &c. Dr. Kennedy, in the *London Journal of Medicine*, has an article on functional affections of the spine liable to be mistaken for organic diseases. Gamgee, of Manchester, in writing on a disease which he calls "nervous debility," says: "Under the general and somewhat indefinite term, nervous debility, I may include cases in which either as a result of long continued bodily and mental exertion, or of undue excitement of certain cranial or spinal centres, or of a disturbed nutritive balance of the organism