

generally; the individual becomes the seat of symptoms which indicate that the nerve centres are in an enfeebled condition, and especially, that upon very slight exertion they manifest the symptoms of fatigue. Such persons usually complain of deep-seated pain in the dorsal and lumbar regions of the spine, neuralgic pains of the limbs, especially of the legs, and sometimes twitching of the legs." Whenever in the spinal cord we have an interference with the balance of power, between exhaustion on the one hand and repair on the other, we may expect abnormal manifestations, as of pain and spasms. Brown-Sequard, in his work on "Reflex Paralysis," maintains that most frequently the spinal irritation, giving rise to reflex paralysis, starts as an outside excitation from some sensitive nerve, and quotes as illustrations, "paralysis of one arm, one hand, a few muscles of the face, the eye, the neck, the bladder, the rectum," &c., and observed as a consequence of an excitation of a sensitive nerve of animal or organic life, and resulting from such causes as teething, worms, some kinds of irritation of the womb, &c. Erb, in his work on diseases of the spinal cord (the ablest and most exhaustive treatise that I know of), devotes a chapter each to "spinal nervous weakness," "spinal irritation," and "spinal anæmia." Owing to the length that my paper has already reached, I will only allude to them cursorily. "Spinal nervous weakness," is characterized by subjective complaints, as pain in the back, quick exhaustion, shooting and tearing pains in the regions of certain nerves, cold hands and feet, &c. The name "spinal irritation" he applies to cases occurring chiefly in the female sex, and characterized by great irritability of the sensory functions with motor weakness and debility, pain in the back, and great sensitiveness of many spinous processes to pressure, and which are diagnosed by the great inconstancy of the symptoms, and a great variety in the localization and the apparent nature of the case, but which possess certain essential symptoms in common. "Spinal anæmia," as the name implies, is a diminution of the amount of blood in the cord from whatever cause. Hammond, of New York, disposes of the class of diseases referred to in a chapter on "spinal anæmia," and bases his observations upon a careful study of one hundred and twenty-seven cases occurring in his own practice. He regards them as being divided into two cognate

affections, and differing in symptoms according as the morbid action affects the posterior columns of the cord, or affects the antero-lateral columns; the former corresponding to what is usually called spinal irritation, but which he maintains should be designated "anæmia of the posterior columns of the cord."

From the authors referred to, and an almost endless list of names quoted by each of them in turn, together with my own limited experience, I am convinced that the symptoms of many of the obscure cases that we meet in practice are traceable to some irritation in the spinal cord, causing functional disturbance, and that it is of the greatest importance that they should be diagnosed from those structural lesions of the cord, of which myelitis may be taken as the type. An error in this respect would almost certainly lead to serious consequences. In mistaking and treating congestion of the cord for spinal anæmia, delay and exaggerated symptoms, but not necessarily permanent injury would result; reversing the order, and treating anæmia for congestion of the cord, there would be a great risk incurred of producing irreparable mischief, as this treatment would tend to increase rather than diminish the quantity of blood in the cord. Continued turgescence is almost certain to produce interstitial changes, and a consequent loss of function. The diseases most likely to be confounded with spinal irritation are angular curvature, congestion, meningitis and myelitis—diseases the treatment of which is very different. Generally speaking, patients affected with spinal anæmia are better in the morning than in the evening, the recumbent position favoring an increased supply of blood to the cord. Those therapeutic agents, as bromide of potassium, ergot of rye, belladonna, &c., that lessen the quantity of blood in the cord invariably intensify the morbid symptoms of spinal anæmia; while they are effectually lessened in severity by remedies which produce hyperæmia of the cord. Patients who are subjects of spinal irritation are, as a rule, below par, in delicate health, and usually very sensitive, and the pain in the back is generally very superficial, is in fact a reflex excitation, conveyed through a cutaneous twig given off from each compound spinal nerve, and terminating immediately over the spinal processes.

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