

sign. The tenderness may be confined to a single intervertebral space, or there may be several together tender, with one more so than the rest, gradually shading off; or again the whole spine may be hyperæsthetic on pressure. In short, I would insist that a careful examination of the spine be made in every case suffering from one or more of these pains, aches, spasms, or sensations, whether fixed or fleeting, without fever or appreciable organic change to account for so great and often so persistent suffering; and especially if the symptoms persist or recur after a careful course of anodynes, antispasmodics, and alteratives. I have, time and again, seen cases of apparent cardiac disease, or gastralgia, resist ordinary treatment for years, and finally yield promptly and permanently under treatment directed *wholly* to the spine; and I am sorry to say that I have been called upon to treat a recurrence of neuralgia of the stomach, colic, and the like, half a dozen times in a year, and I never did suspect the true nature of the trouble.

The *nature* of this disease is not well understood. Pathologically it is entirely distinct from active congestion, inflammation, atrophy or hypertrophy, induration or *ramolissement*, or any other affections of the medulla spinalis involving organic lesions or destruction, with the resultant paralysis of the parts below. Nor have I ever seen it, to any great extent, influence locomotion; sometimes, however, a slight degree of numbness or anæsthesia is complained of in the extremities. Its nature has generally been ascribed to a rheumatic or gouty condition of the ligamentous structure of the spine. This must be erroneous in the vast majority of cases, at least; for, in the absence of any history of rheumatism or gout in any other portion of the body, and in the total absence of pain or uneasiness about the spine even on movement, it is difficult to imagine that either of these could exist for months and even years without having been suspected.

In the absence of an opportunity to observe the morbid anatomy, I have long since regarded it as some kind of *passive congestion* of the membranes of the cord, and most likely the *pia mater*, arachnoid, and the loose areolar

tissue by which the latter is connected with the medulla spinalis. The engorgement may be sanguineous or serous, or both. The arachnoid is scarcely susceptible of congestion itself, but the surrounding areolar tissue is, and the irritation is most often met with in the cervical and dorsal regions, where this tissue is most abundant. Some anatomists contend that these slender filaments of areolar tissue are nervous fasciculi, and that they arise from the arachnoid, and are analogous to those of the sympathetic, and that there are also ganglia to be found here. But, be this as it may, it is very easy to understand how any alteration in structure here from congestion or infiltration, or both, must irritate the outgoing spinal nerves, which impression will be conveyed centrifugally, giving rise to the symptoms enumerated. In those cases in which the disorder is manifested in the internal organs, which indeed are very numerous, the impression is conveyed through the catenation of the spinal nerves with the external branches from the ganglia of the great sympathetic, by which system most of the organs are richly supplied, and some of them, indeed, exclusively.

The *cause* of this disorder is, in many cases, obscure. It is most often met with in the higher walks of life, in those who lead an inactive life; in those of a nervous or phlegmatic temperament, whose organization is rather below the healthy standard; and in such women as are disposed to hysteria. In the South, it is often met with in the case of ladies of lethargic habits, and who are indisposed to locomotion. It is more often met with in women than in men, and more often during the years of menstruation than before fourteen and after forty-five. Girls under fourteen and men are by no means exempt from it; but it very rarely occurs in boys. I am very sure that whatever tends to enfeeble either of the great systems of the organism, whether during employment or leisure, or whatever favours local congestions, superinduces this disease. I have often met with it in the cases of sewing-girls, school-girls, teachers, and ladies who spend much of their time at embroidery and needle-work. Diseases and displacements of the uterus of long standing afford a fruitful cause.