

membranes (*Dictionary of Medicine*, Article "Spinal Irritation.") In these cases the state of the uterus is abnormal in one, and unusual in the two pregnant cases; this has developed an exalted state of the nerve supply, and this in turn has led to the so-called irritant state of the lumbar part of the spine. Many cases could be related to support this view as to causation, and it is probably due to the fact that the gastric mucous membrane is so often in a morbid state, that symptoms of irritation of the dorsal portion of the spine are so frequently met with; and, doubtless, of the many cases of pregnancy in which pelvic pains are complained of, the majority are of spinal origin, secondary to the pregnant condition. Similarly many cases of tenderness in the cervical spinous processes with accompanying phenomena may be traced to the morbid states of the mucous membrane of the throat, and possibly of the nose also. Still there are many cases in which no such cause exists. I remember the case of a lady who consulted me last year, for severe pains in the throat, which was slightly congested, but otherwise normal. Pressure over the middle portion of the cervical region greatly increased the pain in the throat. A blister over the tender spinous processes soon relieved the symptoms. Many cases of neuralgia of the head, with tenderness of the scalp, derangement of vision, tinnitus aurium, yawning, etc., are due to so-called irritation of the first and second cervical vertebræ. It is not necessary to relate particulars of such cases, as I have already detained you too long. Affection of the lower portion of the cervical spine is comparatively rare in my experience, and has occurred usually in conjunction with symptoms in the dorsal region.

In the large number of cases that have come under my observation, none showed any signs of paralysis or contractures as described by some authors. I do not well see how such a state can be produced by the conditions present in spinal irritation.

To what morbid conditions are the phenomena of spinal irritation due is an interesting enquiry, to which the answer is neither definite nor satisfactory. No one dies from it, and all those having it and dying from some intercurrent disease, furnish no data, even to the closest

scrutiny. However, this is true of all forms of neuralgia, with which it is closely allied if not identical. As in the ordinary neuralgia, the subjects of spinal irritation are always more or less debilitated; in both, fatigue and all depressing influences predispose to attacks, and increase their severity; in both, there are tender points along the course of the affected nerves; vaso-motor changes as indicated by arterial tension, occur in both; and in both, a peripheral irritation may be the apparent exciting cause. Spinal irritation differs from ordinary neuralgia chiefly, with few exceptions, in its gradual onset, its persistence, and, as a rule, the affection of a wider area. In the times of the Griffins and of Teale, spinal irritation was thought to be always connected with the hysterical condition. Later experience proves such not to be the case. In many, even of the worst, with which I have met, no hysterical tendency existed, and a large proportion of them occurred in the male sex, in whom hysteria is rare.

Of diagnosis I need say nothing; no difficulty will be experienced if but attention be directed to the spine. Treatment has already been pretty fully indicated; in mild cases it is eminently satisfactory, the symptoms being relieved by applying a blister to the tender spinous process. In the severe cases it often proves as eminently unsatisfactory, or, at most, may give only partial relief. In all cases the cause should, of course, be sought for, and, I am convinced, it will be found, oftener than any of us imagine, in morbid states of mucous surfaces or of visceral organs. For the relief of the spinal symptoms counter-irritation is most prompt. If a blister is not advisable, others may be tried. I have found ice beneficial, applied morning and evening, either in a bag laid on for several minutes, or a smooth piece may be rubbed slowly backwards and forwards over the tender part. It causes considerable pain, and few patients will be found to persist with it till the symptoms are completely removed. Owing to debility, general treatment is called for in all cases. Of tonics, the phosphorus compounds are most highly commended; cod liver oil, arsenic and strychnine are also useful. The diet should be as liberal as the digestive organs are equal to. Most authors recommend a gen-