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CASES OF GASTRALGIA TREATED BY CENTRAL  
GALVANISM.

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THE terms gastralgia, angina pectoris and cardiac neuralgia, are used somewhat vaguely and indiscriminately. The first term, gastralgia, is applied to neuralgia of the stomach; it may or may not be accompanied by spasm, by pyrosis, heart-burn, flatulency, or other symptoms of dyspepsia. The most distressing accompaniment of the disease is spasm, which sometimes draws up the muscles of the stomach and holds them as if in a vice. In its relation to dyspepsia, gastralgia may precede, accompany or follow it; may create dyspeptic symptoms by the disturbance and debility it excites; may complicate the ordinary agonies of indigestion, or it may come on as a resultant of long-continued dyspepsia. Just as there may be dyspepsia without gastralgia, so there may be gastralgia without dyspepsia. In gastralgia, the pneumogastric is involved, and it is probable that the whole solar plexus may share in the disturbance. The two noteworthy features of gastralgia are intensity of the distress and its periodical character. Dr. Michel Peter, of Paris, has called attention to what he terms diaphragmatic neuralgia; the symptoms of this affection are spontaneous pains at the base of the lung and in the shoulders, increased by pressure; tender points near the anterior insertions of the diaphragm at the seventh, eighth, ninth and tenth ribs (especially marked at the ninth, at the posterior insertion of the last rib and at the lateral portion of the neck beyond the internal head of the sternomastoideus, where the phrenic nerve is superficial, and on the sternum at the level of the second or third intercostal space); tenderness of the second, third, fourth and fifth cervical vertebræ; irradiation of pain to shoulders and neck; and, finally, difficulties of respiration, of mastication, of deglutition and of movement of the left arm.\*

A comparison of these symptoms with the symptoms generally regarded as indicative of intercostal neuralgia, gastralgia, angina pectoris, shows clearly enough the difficulty of establishing the existence of pure and simple diaphragmatic neuralgia; many of the symptoms laid down by Dr. Peter as of diaphragmatic neuralgia are certainly not peculiar to it, for they are found in those cases that are commonly classed as gastralgia, angina pectoris and intercostal neuralgia. The tenderness of the sternum which he speaks of, and also the tenderness of the cervical vertebræ, are found in thousands of patients who never

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suffer from neuralgia, as such, in the diaphragm or heart or stomach. It is not unreasonable to believe that such a disorder as diaphragmatic neuralgia, single or uncomplicated, may exist, but it is probable that it usually exists, if at all, as a part or complication of gastralgia or angina pectoris, and we may fairly suppose that neuralgia may pass from the phrenic to the pneumogastric nerve at short notice.

Dr. Anstie has pointed out the relation that exists between asthma and gastralgia and facial neuralgia; reasoning from analogy and from observation, it would appear to be entirely possible that neuralgia of the phrenic nerve might be included in the same family. It is certainly true that a constitution which is liable to suffer from gastralgia is also liable to suffer from facial neuralgia; and it is equally certain that these diseases may, so to speak, interchange at different periods of life, and may take the place of each other. The nervous diathesis may, in early life, manifest itself by facial neuralgia, or sick headache; later, by gastralgia or angina pectoris; and, last of all, develop into asthma. Like all manifestations of the nervous diathesis, these different neuralgias are subject to hereditary laws, and may be handed down, with various modifications, and interchange from generation to generation.

The following cases will illustrate the propositions which have been advanced above:—

CASE I.—*Severe Gastralgia of fourteen years' standing; Periodical Attacks at Night; Rapid and Permanent Cure under Central Galvanization.*—Dr. S. J. H., a physician aged about 36 years, consulted me in the autumn of 1870. For fourteen years he had suffered from attacks of gastralgia of a most violent character; these attacks came on usually at night, while in bed, after midnight, before or about two o'clock; the attacks would last sometimes several hours, and the pain was of the most distressing character. Of the various methods of relief that he had used, alcoholic liquors seemed to be the most efficacious, but the respite they caused was only temporary. The appearance of the patient suggested robust health; nutrition was well maintained and the functions were generally well performed.

Examination gave little information. Disease of the heart had been suspected, but the careful and repeated examinations of Dr. Thayer established the fact that there was no disease of that organ. Tenderness of the epigastrium in one spot sometimes, but not always, existed. My diagnosis was neuralgia, in which the solar plexus had a share. I suggested central galvanization. The patient had previously tried faradization without any benefit. I had little hopes of helping the patient; the persistency and fixity of the symptoms and their periodicity gave an unfavorable prognosis, and only by my urgent solicitations did the doctor allow me to experiment on him.

Treatment by central galvanization was commenced January 3, 1871, and was kept up for two months, two or three times weekly. In less than two weeks, benefit was apparent; the periodicity and violence of the attacks were somewhat modified, and in a month it was evident that the disease would yield more or less permanently to the treatment. Occasional relapses occurred, as always in similar cases, reminders of the former sufferings, showing that the evil spirit was not wholly cast out; but in three months from the time the treatment was commenced, the patient regarded himself as well. Since that time,



he has relapsed but once, and then as a result of bad hygiene, and he was promptly relieved by a few applications. The only question now remaining was, how permanent is this relief? Already, more had been done by central galvanization than by any one or by all other methods of treatment combined; but had electricity so modified the nutrition of the nerves that they would not again return to their abnormal condition? Two years have elapsed; I have frequently met the patient, and he remains well, though constantly engaged in laborious duties.

CASE II.—*Gastralgia of six years' standing, permanently Cured by Central Galvanization and General Faradization.*—Mr. S., aged 28, was referred to me by Dr. Thayer, Nov. 25th, 1871. The patient was a young merchant who had an excellent constitution, and who had never known disease of any kind, by personal experience, until about six months before I saw him. His appearance indicated health, and only his own statement suggested the possibility that he was a sufferer. The attacks of gastralgia were his only symptoms; his appetite was fair, and his sleep was not disturbed by pain; his capacity for muscular or cerebral toil was excellent. The attacks were not so violent or so frequent as in other cases that I had seen, but they were sufficient to greatly annoy and depress the patient; and there was less periodicity than is observed in some cases, and there was more of dull aching than of sharp or acute pain.

Encouraged by my success in far severer cases, I gave the patient a favorable prognosis, and at once began the use of central galvanization alternately with general faradization. Relief was effected during the first week, and, by December 1st, the patient was almost entirely free from pain. Central galvanization seemed to be the more efficacious of the two methods employed; I arrived at this judgment by observing the immediate effects of the treatment the same day that the application was made. The usual relapse occurred, and caused discouragement; but the patient persevered, and by the middle of December—three weeks from the time the treatment began—he was entirely restored, and, up to the date of writing (July 1, 1872), he has remained well.

CASE III.—A medical friend of mine, a gentleman of middle life, had been troubled for a number of weeks with attacks of gastralgia, accompanied with constant dyspeptic symptoms of a most severe character. He had become pale, and had lost considerable flesh. The attacks frequently came on at night, and compelled him to rise and use powerful counter-irritation with mustard or bisulphide of carbon.

In the way of treatment, he had used general faradization, in the application of which method of electrization he was well skilled, and had adopted a rigid system of diet, but without effect.

He consulted me in the fall of 1871, and I at once began to treat him by central galvanization, and with speedy effect. In a few weeks he was entirely cured, and to this day has remained well, save one brief relapse, caused by over-indulgence or exposure. The dyspeptic symptoms, as well as the gastralgic, disappeared.

In the above cases, I have laid much stress on the method of central galvanization, because in all of them it appeared to have such striking effects. I would not by this give the impression that in all such cases the method must be used in its entirety; probably the placing of the

negative pole over the stomach and the positive over the spine might suffice; but, as a rule, in all diseases complicated with debility, I secure a larger reward from the complete method than from a fraction of the method.

If I should judge from my experience up to this date, I should say that the prognosis of gastralgia, under electrical treatment, is better than that of any other form of neuralgia under the same treatment. In the worst forms of facial neuralgia and sciatica, I often find incomplete results or failure; but, thus far, all my cases of gastralgia have recovered.\*

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\* The general subject of the treatment of neuralgia by electricity is discussed in my article on that subject in the *London Practitioner* for September, 1873. For a description of my method of central galvanization, see *New York Medical Journal*, October 12, 1872.