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CLINICAL NOTES UPON SPASMODIC TORTICOLLIS; WITH SPECIAL REFERENCE TO TREATMENT.

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Torticollis (wryneck) is due to a spasmodic condition of the cervical muscles, chiefly those supplied by the spinal accessory nerves. The name is derived from two Latin words, *tortus*, twisted, and *collum*, neck. The terms *tic rotatoire*, *Nickcrampf*, etc., are used as expressive of the spasm, muscles affected, tenacity, etc.

This abnormal contraction of the cervical muscles is directly the result of irritation of the external cervical branch of the spinal accessory nerve, which having two different origins, a spinal and cerebral, has two distinct functions. The spinal or motor branch supplies the motor power to the sterno-cleido-mastoid and trapezius muscles, and communicates with the first, second, third, and fourth cervical nerves, its roots being traced between the anterior and posterior roots of the first five cervical nerves. As we have seen, wryneck proper is an affection of the sterno-cleido-mastoid and trapezius muscles, but in cases of long standing and great severity, especially in bilateral affections, the splenius capitis, scaleni and platysma myoides may become implicated from continuity of nerve fiber, and contiguity of muscle tissue.

This affection presents the objective phenomena peculiar to all spasmodic conditions of the muscles supplied by the peripheral nervous system. The most frequent and simple exhibition of other nervous irritation of the same nature may be seen in the facial spasm of the trigeminus, upper third, in spasmodic closure of the eyelids, with twitching and contortions of the forehead.

To torticollis proper, medical literature has devoted comparatively small space, the sentiment being conveyed that wryneck, being of reflex origin and generally an obscure and complicated one, when it is once well established in the individual, is the condition of a lifetime. Its clinical history is certainly that of permanency.

Wryneck may be divided into three classes, dependent upon the degree of severity, nature of spasm, and muscles involved. The partial or limited contraction of the cervical muscles due to cold, exposure, strain or rheumatism, and which disappears after a period more or less brief, under the administration of heat, liniments, friction, etc., is a condition commonly known as "stiff neck"; a painful state with which all are

familiar, most of us having had personal experience, and does not come within the province of torticollis proper: the former being a condition of the muscle substance itself, while the latter is dependent for its abnormal condition upon the nerve.

In this affection we have the two forms of spasms, the tonic, which is a state of permanent rigidity and immobility of the muscles, and the clonic or tetanic spasm, which consists in alternate contraction and relaxation. The movements are varied and accentuated in accordance with the muscles involved. If it is the trapezius, unilaterally, the head is drawn backward against the shoulder of the affected side, the chin is twisted to the opposite direction, and if the spasm assumes the tonic form, the head is permanently fixed, and can hardly be forced into its normal position; nor will it remain so under any restraint the patient may be able to endure. If the splenius be affected we find the head drawn back against that side, and the enlarged muscle may be felt protruding beyond the cervical edge of the trapezius.

While tetanic spasms are due to the irritability of the peripheral nerves, and may attack any one or part of the superficial muscles of the head or face as well, and their duplicity of action leaves no doubt that all spasms of the external superficial muscles are of the same nature, and are directly due to the same cause, this should by no means warrant us in the conclusion that they may all have the same origin, primal or remote; on the contrary, I think, we may properly make the assertion that irritability of the superficial nerves is the result of causes not always easily ascertained; being sometimes very remote, the nervous irritability being a symptom in the strictest sense of the word. Nerve irritation may be at any point of its course, and the spinal accessory being a complex nerve, having its action in the medulla as well as in the spinal cord, renders it a very difficult matter to locate the exact place of irritation; and owing to the complexity of the nerve branches and their anastomoses with the pneumogastric, we may have a reflex action from gastric disturbances, or by some lesion of the upper cervical vertebræ. In such an event the cause may be sufficiently obvious to enable one to act intelligently in attempting a cure, while in very many other instances we are obliged to grope in the dark. In this, as in all other peripheral neuroses, pathologic proof is absent.

Contraction of any muscle must be recognized as an exhibition of contractile fiber in response to nerve stimulus, and it is only when it ceases to become rhythmic in its action, or refuses to act altogether, that we have what we term a pathologic condition. The only visible result of nerve irritation that we have to go by is change in shape and mobility of muscle as a whole. Wryneck, as with the majority of peripheral nerve affections, is more convincing in its identity than the *raison d'être*.

Case 1.—My first case of torticollis was in 1857, the last year of my student life, and occurred in a woman aged 33. Her trouble came on without any apparent cause; first showing itself in merely a tendency to stiff neck at times and without any appreciable provocation. It had continued for about seven years, increasing in severity. At the time I saw her the neck was drawn around with a combination of tonic and clonic form of spasm, being twisted with a jerk and remaining in the tonic condition for a day or two, never assuming the normal state, but would be working back and forth. Her general health was fair; objective symptoms nothing to require attention with the exception of a large ulcer inside the left leg. This ulcer was not of the varicose form, but was what is termed by the laity a "fever sore"; it was two inches by two and one-half, and had been in existence for three years; a non-irritable, chronic ulcer. There were no varicose veins, no history of syphilis, no disease of the periosteum. The best of surgical and medical skill had been employed. As an incentive for me to do my best I was told that if I cured Mrs. B. I should have my room rent free for the next six months.

Without regard to etiology or pathology I began the following treatment: A poultice of pulverized ginger, mustard, capsicum, cloves and cinnamon, mixed with cold water and applied to the spine twice daily, from the first cervical down six inches, for one hour at a time. This was for the purpose of promoting counter-irritation, and also by the absorption of the oils these ingredients contained, to promote stimulation of the deeper nerves, carrying it by reflex action back to the nerve roots.

For internal medication I gave the following:

R. Pulv. capsici,
" myrrhæ ãã 18 (gr. ii)
" cinnamomi
" asafetidæ ãã 2.00 (grs. xxx)
" sapo.

Mix. Divide into thirty pills. Take ten pills after every meal.

This dose seems almost cruel as we prescribe to-day, but we must remember that this was an incident of thirty-nine years ago, a period very different from the present time of concentrated medicines; but a period too, which had remedies quite as efficient in their action as at the present time of artistic preparations. I dressed the ulcer with an ointment made up of lard and powdered cinnamon, of each half a pound, with sufficient quantity of whale oil to make it of proper consistency. This was applied to the ulcer twice daily. This treatment was kept up for months without change, and the result was a perfect and permanent cure, both of the torticollis and the chronic ulcer of the leg.

While the origin of torticollis may be sometimes as apparent to the physician as the door-plate on his own door, yet I intend to show in the following cases that it may be so swaddled about by the environments of disease obscurely located, that treating for an ordinary cause may result in ignominious failure, as shown in the following:

Case 2.—An American woman, aged 35; mother of three healthy children, had been troubled with spasmodic torticollis for three years, or since the birth of her last child. Reckoning from that period as the beginning of her trouble, one would be very liable to attribute the cause to some lesion, more or less important, of the generative organs. Such had been her experience with those whom she had consulted. And her symptoms were typical of such a trouble, only rather more exaggerated than ordinarily met with. Her head would give a sudden and emphatic jerk to the right, then turn as quickly toward the left, where it would remain a minute, then as quickly be jerked back into the normal position. Here it would remain for about ten minutes, generally, though sometimes it would rotate back in a minute or two, and go over the same routine again; keeping up a constant succession of these motions. She was compelled to wear a leather collar buckled tightly around the neck, embracing the face up to the ears, and fastened with a strap under her arms to keep her head in position. But even with this appliance the muscles were in a state of clonic spasm most of the time, unless under the influence of a powerful opiate, which she was compelled to take at night in order to obtain any rest at all. Her treatment had been varied, prompted by all sorts of theories as to the origin of the trouble, but the bene-

fit had been slight, and only temporary at the most. As this period antedated the day of hysterectomy, and ovariectomy was almost unknown, her womb and ovaries were not removed. No definite cause had been assigned. I had the advantages accruing from the experiments of those who had attempted a cure in her case; and it certainly abridged whatever experimenting I might otherwise have done. She had her own teeth, but upon examination it was shown that although few were missing, nearly every one was more or less in a state of decay; still, as they had never troubled her to any great extent it was not surprising that as a cause of her trouble they had been overlooked. Examination then determined me to act upon the decidedly strong suggestion which their appearance seemed to offer. I extracted all of her teeth, gave a mouth-wash of a 1 per cent. solution of potassæ chlorate, and internally, .07 (1 grain) of sulphate of zinc in two ounces of water, after every meal. In less than one week, or as soon as the soreness had subsided, a great improvement became apparent. She continued the treatment for three weeks, at which time the gums had completely healed; the clonic spasms had nearly disappeared, and in three months from the time her teeth were removed she was perfectly well, and there was no relapse. There is no question as to the cause being anything else than reflex irritation from the decayed teeth.

Case 3.—Mrs. S., aged 25, had spasmodic torticollis dating from birth of child, six years previous. She had been under treatment of specialists at different times for months together. The patient seemed to be well nourished, and all the organic functions normal. The bowels were regular, no indigestion, no headache, no spinal irritation, no laceration of uterus or perineum, and appetite good. I gave a pill composed of zinc sulphate .07 (1 grain), extract of valerian .12 (2 grains). One to be taken after every meal. A poultice of mustard, ginger, cayenne pepper, cinnamon and cloves was applied to all of the back, behind the ears, over the chest and throat the greater part of the day; keeping it on one spot sufficiently long to irritate the part, then removing it to another, the object being to keep every inch of the skin in a constant state of irritation, from the first dorsal vertebra upward and the same region in front. The poultice was mixed with cold water. Improvement commenced after the treatment had been in operation for two weeks, and at the end of four months the patient was well. There was no assignable cause for this case, and I would not have been surprised to see a relapse, as a result of cold or exposure; but the cure remained complete.

Case 4.—At the risk of repetition I now present another case to further illustrate what decayed and decaying teeth will do for a person of nervous temperament (or any other temperament, as for that); as such apparently simple causes are generally overlooked; and, again, to show that it is not always necessary that the process of decay should have advanced to any very perceptible degree in order to produce the mischief. This was a case of trigeminal neuralgia of three years' standing, in a woman of 28, and had resisted every means employed by competent physicians. The teeth were apparently all sound, and she had her full complement; but they were quite crowded, owing to size. From some seemingly trivial indications, but which from previous experience I considered to be fraught with meaning, I ordered their extraction. The mouth was washed with a 1 per cent. solution of potassæ chlorate every two hours. The neuralgic condition began at once to disappear, and in three weeks she was well. No relapse. This shows what may be brought by sound teeth when they press upon the terminal nerves.

Case 5.—Another case in the same category will, I trust, be sufficient for my purpose. This was a case of facial paralysis with partial paralysis of the left arm, cured by extraction of all the teeth in both upper and lower jaw. They were nearly all carious. The paralysis was caused by reflex irritation from the carious teeth.

Case 6.—Mr. W. S., aged 25; a drummer for a silverware manufactory. Family history good; no symptoms of gout, rheumatism, or tuberculosis on either side of the house. He had never had any illness, and habits were good; organic functions all perfect. After riding several hours on a hot, dusty day, and sneezing a great deal from irritation caused by the dust on the mucous membrane of the nose, he began having slight contraction of the scaleni muscles. He paid little attention to it for several months, when it became very annoying; he then applied to a physician for relief. He was given some sort of stimulating liniment, and anti-rheumatic remedies; these he used for several weeks, but without any appreciable benefit. He then took a two months' course of massage. After this he tried faradic, galvanic, and static electricity for several weeks, but the spasms still continued unabated. When I first saw him he had been experimenting for over a year. It

seemed that as the various new-fangled fads etc., had all been tried; there was little left to be employed but good judgment and common sense. The only treatment I gave—as his general health seemed to be perfect—was a hot shower bath night and morning, fifteen minutes at a time on the neck and shoulders. This treatment brought about the most brilliant results, and at the end of six weeks he was perfectly free from trouble, and there has been no relapse.

Case 7.—Mr. J. L. W., aged 38, a banker, had been ill with spasmodic torticollis for two years. He had been under numerous forms of treatment, and particularly the celebrated mud baths. This was quite a unique case in one respect, viz.: A part of the time the trouble would be confined to one side exclusively for two and three weeks, when it would turn to the other side for the same period, leaving the previously affected side apparently as well as ever it was.

I began treatment by giving hypodermically one drop of the following solution:

R. Aurii et sodii chloridi	1 gr.	07
Sodii arsenias	1 gr.	07
Sodii bromidi	3 grs.	19
Aquæ dest.	1 oz.	3100

Mix.

Injecting five drops of this into the belly of the muscles twice a day in rotation; going over the same muscle on each side, beginning, for instance, at the origin of the muscle and gradually going over its whole length, then taking up another in the same way. The strictest antiseptic precaution was observed. He had considerable brachial neuralgia; otherwise was free from pain. No inflammation or abscess was ever produced by these injections, and but slight pain. This treatment was continued with great regularity for five weeks; the improvement was gradual, but even and permanent, and resulted in a complete cure, without any recurrence at the end of fifteen months.

Case 8.—J. B., a boy aged 9 years, was playing "leap frog" when by accident he was kicked in the neck; but from all appearance he was not particularly injured, and made no complaint until about two weeks afterward, when his head began to twitch backward, yet so slightly that it was hardly noticeable; but in the course of several weeks it became a continual cause of complaint. He was under treatment for six months with various mixtures of liniments, ointments, oils, plasters, electricity, etc., previous to my seeing him; but they had produced no perceptible benefit. Stomach and bowels in good condition, urine normal. I applied the following ointment to his neck:

R. Aurii et sodii chloridi	5 grs.	32
Ammonii hydrochloras	10 grs.	64
Aquæ, well rubbed in	1 drm.	400
Adipis benzoas.	1 oz.	3100

Mix, and apply about ten grains three times daily.

R. Ammonii hydrochloras grs. v. 32

To be taken every three hours in a wineglass of water.

This treatment was continued for six weeks with marked improvement. Then ammonia hypophosphite was substituted for the hydrochlorate, in three grain doses for two weeks. Considering the severity of the case his recovery was unusually expeditious, a cure being effected in six weeks.

Case 9.—H. M., a man of 76 years. This man had been employed in a granary for ten years; previous to that he had been in a brewery, and I think there was reason for supposing his blood had become contaminated by micrococci from diseased grain. His face was bloated, and he was always more or less asthmatic. Aside from this, there was a red blotch over his hands and arms. He complained of constant pain in the region of neck and shoulders; the brachial region was the nervous part affected. Soon after first seeing him he was exposed to a severe March storm, and aside from the wetting he was chilled. Driving all day had strained this part of the muscular system, and when I saw him that night I found a condition of acute muscular rheumatism, as one would naturally expect. Proper treatment removed the acute symptoms, but in their place was established, right before my eyes, as it were, a decided case of bilateral torticollis, implicating the whole brachial region (as had the previous attack of rheumatism, which had been removed apparently to give place to this condition). His sufferings were intense; not for one moment during the twenty-four hours was he permitted to rest, save when under the temporary influence of powerful anodynes. In addition to this a persistent cough set in; his breathing became very labored, showing, to my mind, a complication of the phrenic nerve, to which might be traced the spasmodic condition of the cervical plexus. The treatment was the following:

R. Fl. ext. cimicifugæ	
Tr. gelsemii	
Tr. guaiaci	aa gtt. x. 65

Mix.

The above amount to be given every three hours in a wineglass of milk. Hypodermic injections of hot water, to which .65 (grains x) of salt were added, were made every day into the clavicular origin of the sterno-cleido-mastoid muscles of both sides. This course of treatment was continued every day for two weeks, with marked improvement. After that time the injections were discontinued, but the internal treatment was kept up for three months, and at the end of that time there was no further medicine required for he was perfectly well.

Case 10.—Thomas W., a sober, working man of 45, was suddenly leveled to the ground and rendered unconscious by some means then unknown to him, one night in December, 1894. (It was afterward shown that he was struck by a sandbag.) Consciousness returned after about forty-eight hours, but with it the inability to move his head. Constant pain was felt in the occiput and down the back and sides of the neck, extending by flashes down his arms to the elbows, with numbness of the finger-ends. Upon being lifted in bed he was seized with spasms which twisted his head from one side to the other in quick rotation, then backward over the scapula, with such force that it seemed his neck would be broken. This condition lasted for twenty-four hours, when the patient became unconscious from exhaustion. There must have been some irritating lesion of the spinal cord, extending to the cortical substance of the brain, and the question might be raised whether this was a case of torticollis proper, or of spasms caused by injury to the brain. The pulse and temperature were normal throughout. I gave 4.00 (1 dram) of liquor ammonii acetatis with .65 (10 drops) of tinct. gelsemium every three hours. Hot compresses to the occipital and cervical regions were constantly applied. In about five hours the spasms were very decidedly abated, and in the course of a couple of weeks the pains had all ceased; but there was still to be noticed a tendency to spasmodic contraction of the muscles. I ordered tincture of lobelia be rubbed on the parts, and had him take .32 (5 drops) of the same every three hours. This seemed to act so nicely that in the course of a week the spasmodic tendency had disappeared; but I continued the treatment one week longer, so as to ensure a perfect recovery.

In conclusion, I will copy the following case from one reported in my paper, on "Nerve Vibration and Excitation," as read in the Section on Practical Medicine, Materia Medica and Therapeutics, at the thirty-sixth annual meeting of the AMERICAN MEDICAL ASSOCIATION, held in New Orleans, La., April 29, 1885:

A married woman, aged 29; of extremely nervous temperament, and suffering from mental trouble brought on by death of a child. Electricity had been applied by a competent person, but this seemed only to aggravate the case. The muscles of the right side were affected. This condition had existed for several months. Not only the sterno-mastoid, but the deeper groups of muscles were involved. As the motor filaments of the pharyngeal branches of the pneumogastric are derived from the spinal accessory, I directed my treatment to the base of the occipital bone, across to the upper part of the sterno-mastoid, following the course of the nerve as closely as possible.

The treatments were daily, and of fifteen minutes duration. The percuteur was firmly held against the surface, though not pressed down, so that the whole force of the blow might be obtained. Eight cells of the battery were employed, and I used the olive-pointed hammer, tracing the course of the nerve upward and downward, and over the clavicular portion of the trapezius muscle. At the end of the first sitting the muscles of the neck were a trifle relaxed, the patient being able to turn her head slightly; but the next day found the old condition almost reinstated. However on going over the same treatment I found the improvement still more marked than that of the day previous, and, to cut a long story short, the condition steadily improved under every treatment, the deterioration between times being less noticeable. At the end of three weeks the patient presented no signs

of wryneck, and the corresponding muscles of the other side had regained their normal condition. varied the treatment somewhat, as the case progressed, by passing the hammer down either side of the spinous processes, pausing a moment at each. The entire cerebro spinal nervous system seemed to respond favorably to this treatment, and the result was complete restoration to health, and no inclination to return of the torticollis, so far.

This patient had already gone through the usual list of nerve remedies. I ordered that all accessory treatment should be stopped, save good nourishing food, pleasant surroundings, and all other necessary and proper hygienic conditions.

While it is patent to the practical physician that in the treatment of disease in general there can be no prearranged method which shall be applied with positive certainty to all cases, the routine of treatment fitting the condition as surely as a certain size of glove will fit a correspondingly sized hand, this uncertainty is still yet more apparent when we have to deal with diseases of the peripheral nervous system, and is most plainly illustrated in wryneck. I have seen many cases in which treatment has been a complete failure; cases which had been submitted to braces and various complicated devices; but they were used without accomplishing the desired result. The surgeon's knife has also been powerless to help. Nor am I alone in my experience and consequent conclusions. Physicians of wide repute and acknowledged skill corroborate my opinion. Dr. A. McLane Hamilton says on the subject: Braces and apparatus are often worse than useless, increasing not only the patient's discomfort, but aggravating the malady. This opinion is also expressed by Dr. James Ross, Dr. M. Rosenthal, Dr. Gower, and many other acknowledged authorities. Professor Erb, in speaking of the various devices, and surgical operations says: The division of the nerve is an objectionable proceeding, partly on account of the resulting paralysis, and partly because it has been tried and has failed in effecting a cure, and has increased the spasms with unabated violence.

Dr. C. M. Barr says: Instruments intended to forcibly check the spasms can not be worn any length of time. . . they do no good. I have in my own practice seen ten cases that have had various operations performed on the nerves and muscles, and the result has been the reverse of successful, in fact, disastrous.

I have collected statistics from many sources, amounting to between four hundred and five hundred cases in which surgical operations in one way and another have been performed in torticollis, without deriving the slightest benefit therefrom; in fact the conditions were worse than before the operation.

THE FREQUENT DEPENDENCE OF INSOMNIA, MENTAL DEPRESSION AND OTHER NEURASTHENIC SYMPTOMS UPON DISEASE OF THE GASTRO-INTESTINAL TRACT.

Read in the Section on Practice of Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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The group of nerve derangements formerly classed under the terms nervous exhaustion and nervous pros-

tration, and of late more appropriately labeled neurasthenia, is after all a rather vague and indeterminate entity. It has not yet any recognized pathology, and even its etiology is still in dispute. There are not wanting authors, now, who insist that neurasthenia is only another name for toxemia, and that the ptomaines and leucomaines absorbed from an infected or diseased alimentary canal are responsible for all the symptoms which it has so long been the fashion to ascribe to mental overstrain, sexual excesses or other prodigal waste of the vital and nerve forces.

Still others believe that too much food and too little exercise—too much alimentation and not enough oxygenation—cause an overcharging of the blood with uric acid, as well as other products of suboxidation, and that hence arise all or most of these nerve ills which, as is well known, afflict chiefly persons who live a luxurious, or at least a sedentary life, being relatively uncommon among those who use their muscles largely, while they eat and drink abstemiously. Haig,¹ the great exponent of the uric acid theory, believes that butchers' meat, especially when taken in excess, is the most active cause, and he brings forward a very strong array of evidence in proof of his views; but it is probable that he goes too far.

My own belief is, that while any of the various influences just recited may, even singly and alone, produce, under certain conditions, some of the forms or manifestations of neurasthenia, especially in persons who have inherited a tendency thereto, a number of them have usually combined to develop the more aggravated types. Granted, that there are always predisposing conditions, it must now be admitted that the rôle of the indigestions and other morbid states of the alimentary tract, is most important in the causation of these nerve ills. It is an every day observation of physicians who have much to do with nervous patients that their well-being and comfort depend largely upon the condition of their stomachs and bowels.

To give this discussion a more definite and practical character, it will be best to consider here a few of the more marked and familiar symptoms of neurasthenia, rather than that elusive entity as a whole. Let us take, for instance, the mental depression, nervous erethism and insomnia, some one or all of which may always be observed in the severer cases. In the hundreds of neurasthenics who have annually come under my care in that Mecca of American invalids, Atlantic City, the symptoms just named have usually been the most pronounced and troublesome.

They may arise as a result of any of the graver forms of gastro-intestinal disease, such as cancer, gastric ulcer, chronic gastritis and dilatation of the stomach, through the lowered nutrition which such affections induce. Whether this be brought about directly as a result of a starving of the nerve centers, the blood which nourishes them having itself become impoverished, or whether the poisoning primarily of the blood and secondarily of all the tissues, by products of the fermentation, putrefaction and sub-oxidation which such diseases of the alimentary canal greatly promote, is a question which need not be entered upon here. My object in this paper is the more practical one of emphasizing the importance of the part played by stomach and intestinal diseases in a large and most important class of nervous affections.

Cancer and ulcer are apt to be recognized and to receive special attention at a comparatively early stage