

astonished and deceived that instead I chose the topic of Social Laws and Progress, but I hope that this topic has awakened some interest. It is an old privilege of the medical profession not only to deal with the curing of the sick, but also to take an interest in the welfare of the community, and in all states and countries the physicians have been the first to take an active part in the public health.

Please consider my discourse of the evening as the simple tale of a traveler, who while among you wishes to tell you about some new institutions of a foreign land.

Original Articles.

CERTAIN COMMON DISORDERS FREQUENTLY MISINTERPRETED.*

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"Sing, Muse (if such a theme, so dark, so long,
May find a Muse to grace it with a song),
By what unseen and unsuspected arts
The serpent Error twines round human hearts.

Truths that the theorist could never reach,
And observation taught me, I would teach."

— Cowper.

DURING a service of nearly twenty-five years in the neurological department of a general hospital, the fact has been impressed upon me that the usefulness of the neurologist is not limited to the practice of neurology, but that it falls to his lot quite as often to assist in the diagnosis of conditions not strictly nervous, but coming so frequently under his observation, through being mistaken for nervous disease, that they become quite familiar to him. It has seemed to me possible that I could prove useful, at the risk of broaching topics with which you are perfectly familiar, by contrasting the present with the old view of certain disorders not yet made clear in the textbooks, including some which are not strictly neurological. The conservatism appropriate to the textbook, while precluding too rapid adoption of untried ideas, necessarily results in the promulgation of many theories of disease that are no longer tenable.

According to Diogenes Laertius, "it was an old saying of Myson that men ought not to investigate things from words, but words from things; for that things are not made for the sake of words, but words for things."

The diagnosis *facial neuralgia* gives, as a rule, very little clew to the real nature of the malady, especially in the case of young and middle-aged persons. Here is a common picture which should be more generally recognized. A supra-orbital pain, often accompanied by tenderness, appears after rising in the morning, reaches great intensity at noon, to disappear in the afternoon, giving place to a night of sleep unbroken save by dread of the morrow. The pain does not always appear

with just this periodicity, but may come and go, for example, in the afternoon instead of the morning. This variety of "facial neuralgia" is still often regarded as of malarial origin and to be treated with large doses of quinine, though no other suspicion of malaria is present. We now recognize the fact that, in the large majority of cases, these symptoms point to infection of the sinuses extending from the nasal cavity. Inquiries for antecedent coryza and nasal discharge are more pertinent than those regarding sojourn in malarial districts; exploration of the sinuses is more important than that of the blood. The explanation of the periodicity seems to be that the activity of the circulation in the early morning increases the secretion and results in blocking the passages, relief coming tardily through gradual escape, in the course of the day, of the confined contents. In the treatment of this affection the rhinologist has succeeded the neurologist, whose only duty is to make such tardy amends as he can, by way of diagnosis, for his own earlier misconception of the pathology of these cases. Quinine has now given place to the adrenalin spray, and the question of operation on the nerve to that of operation on the frontal sinus and the antrum.

The diagnosis, facial neuralgia, has come to mean very little to me excepting in elderly people whose nerves have become degenerated by atheroma, in which case a true nerve pain, *tic douloureux*, does exist, paroxysmal, severe, and, as a rule, only to be relieved by operation. I have been forced to the conclusion that by far the greater number of facial neuralgias in young and middle-aged persons come from the eye, the ear, the nasal cavity and accessory sinuses, from the teeth, or skeletal disorders such as necrosis or pressure from periostitis or tumor growth upon the trifacial nerve in its long course through bony orifices and around bony prominences.

At the risk of being reminded that

"No wild enthusiast ever yet could rest
Till half mankind were like himself possessed,"

I will take up dental irritation, the etiological factor which has long seemed to me to overshadow all others in importance and frequency as far, at least, as concerns the facial neuralgia of early and middle life.

The trigeminal is the only nerve in the body that comes to the surface to subject its tender terminal filaments to changes of temperature, to pressure of foreign bodies and to the chemical and infectious influences nowhere more active than in the mouth. Nor is dental facial neuralgia limited to cases in which the teeth are neglected. It may occur when they are well cared for. An unerupted wisdom tooth, a "dying" nerve, or the presence of a metallic filling too near the nerve-ending, with the variations of temperature to which it is subject, the change to pulp-stone of the jelly-like contents of the tooth-core, may produce, in a case of apparent oral integrity, the most violent paroxysms of pain, not by any means limited to the point of origin of the irritation, sometimes even remote from it. The paroxysms may be suc-

* Read before the Berkshire District Medical Society, April 30, 1908.

ceeded by intervals of absolute freedom from discomfort and there may be throughout no suggestion of toothache. The general acceptance of this fact has been hindered by time-honored tales of patients who have had an apparently offending tooth removed only to have the pain jump to another tooth. Aside from the fact that this history pertains rather to toothache than to facial neuralgia, even this experience sometimes shows, not that the trouble is not dental, but that the pain is not necessarily referred to the affected tooth. I was taught a lesson by the case of a man in whom the ineffectual removal of one tooth led not to abandoning the search for the tooth at fault, but to his deciding to have them *all* removed with immediate and lasting relief of a troublesome facial neuralgia from which he had suffered for many years.

I have elsewhere reported the case of a middle-aged lady who had suffered from paroxysms of extreme pain generally starting from the left ear and extending, sometimes into the orbit on that side, but more frequently to the other side. She was referred to me by Dr. Blake, who had found in the ear no explanation of the pain. The trouble completely and permanently disappeared upon the removal of a wisdom tooth on the left side, which had been pronounced, like her other teeth, in good condition, but which had a small and undiscovered cavity. I could mention a dozen similar, though less striking, instances, emphasizing the fact that the attention should not be too readily diverted from the teeth by the fact that they have been examined by a competent dentist and reported in good condition.

I have recently seen a young woman of thirty-three, who has suffered for fourteen years from left facial neuralgia of the most intense and paroxysmal variety with painless intervals. So frequent use of morphine has been required as to lead to the fear that the habit would be established. Minute examinations by the most skillful dentists have revealed nothing. Several teeth have been removed and examined for pulp-stone without success. Examination by the x-ray has now revealed an unerupted wisdom tooth.

Before leaving the head I must mention *facial spasm* and "*tic*." The distinction between them is that facial spasm is generally unilateral, is apparently independent of the will and is not amenable to relief by mental training. The movements in facial spasm are lightning-like, oftenest in the lids, sometimes remaining there, again spreading to the lower branches of the seventh nerve. The etiology of the textbooks is vague and unsatisfactory, the treatment recommended generally futile, apart from the recommendation to examine the eyes and teeth, a recommendation apt to be hidden amongst advice as to galvanism and drugs, methods which in my experience have not proved of the least value. In case the twitching begins about the lips one should always look for dental irritation; in case it begins about the eyes, for ocular defect; relief of these two conditions alone (in my experience) cures this variety of facial spasm. Even stretching

or cutting the facial nerve only produces temporary disappearance of the spasm which returns after motion is re-established.

A single case, seen in consultation with Dr. Fitz, will serve to illustrate facial spasm produced by eyestrain. A prominent lawyer has suffered for years from obstinate facial spasm beginning in the eyelids, spreading to other parts of the face and accompanied by distressing sensations especially about the ear. The trouble has for years disturbed his work by day and absolutely precluded reading or other evening occupation. When he was referred to me the spasm was practically continuous and most distressing. He wore heavy glasses combining prism with cylinder. Leading oculists at home and abroad had agreed that nothing further could be done in this direction. I noted, however, that *closure of the eyes caused disappearance of the spasm* and insisted on one more ophthalmological effort. At my request Dr. Mansur made a thorough study of the case and among other modifications recommended exercises in place of the lateral prism, thus greatly simplifying the glasses. Relief was almost immediate and within a month the spasm had disappeared. He can now read till midnight with ease. •My only fear is that he will overtax his eyes in making up for lost time.

In view of the confusion in the textbooks between the forms of abnormal facial movement, a confusion increased by multiplicity of terms, it is not surprising that these movements are often misinterpreted. For practical purposes they may be sharply divided into two classes, — one the spasm we have just considered, a purely mechanical process as shown by its capability of limiting itself to muscular fibers which cannot be contracted separately by the will, the other, by far the more common, movements involving muscles and groups of muscles quite under voluntary control. To such movements the French have limited the word "*tic*," and have named the maker of the movement a "*tiquier*." These movements may become so habitual that they are unconscious in the sense of automatic, just as the act of twirling the watch chain or of whistling may be performed automatically, but none the less they are under the control of the will and if the patient has the patience to acquire the needful self-control they may in time be inhibited. Into this class of movements fall blinking, grunting, frequent throat clearing, sucking, blowing, sniffing, elevating the brows, grimacing and the like.

The only possible treatment of these cases is mental training, and that with so earnest co-operation of the patient that it really amounts to self-training. These movements are made primarily to gratify an obsession, or insistent thought, whether to gratify a sensation or to complete a mental picture, and the training consists in learning to subjugate the insistent thought.

To gain this mastery of oneself may take as much pains and time as to acquire the game of golf, but it is well worth the trouble, for the training is bound to affect the various other results of

the compelling impulse, such as undue sensitiveness to slight and criticism, undue emotional tendency, causeless fears, intolerance of odors, foods and noises; in short, of all the obsessive tendencies which serve to make the life of the chronic comfort-seeker uncomfortable. The words of Epictetus are as applicable now as in the days of the Roman Empire: "No one is free who commands not himself."

Let us next consider one or two of the frequently misinterpreted disorders affecting the upper extremity. First comes the case in which pain in the shoulder and upper arm, with wasting of the deltoid muscle, and loss of ability to raise the arm, give rise to the diagnosis "neuritis." In point of fact, a neuritis giving rise to this set of symptoms would be very rare. The chances are altogether in favor of a joint affection. It must be remembered, in the first place, that joint disease produces sometimes, with great rapidity, wasting of adjacent muscles (so-called joint atrophy). In the second place, we must assure ourselves that it is not *mechanical obstruction* rather than paralysis which prevents the elevation of the arm. This is easily discovered by attempting to raise the arm ourselves, an attempt which generally discloses the fact that the scapula follows the humerus in its upward movement and that holding the scapula down prevents raising the arm. Dr. Curtis, then a promising young surgeon of the Massachusetts General Hospital, studied these cases thirty years ago, and named the affection periarthrititis. Forcible breaking up of adhesions under ether was the first treatment undertaken, but the relief was generally only temporary. Carefully graduated attempts at passive motion were found more promising, but these cases were never quite understood until Dr. Codman recently demonstrated the fact that the real lesion is generally an inflammation of the subdeltoid bursa, which is thereby prevented from slipping under the acromion when the shoulder is elevated. He finds this bursa readily accessible to operation in cases not relieved by passive movement.

In illustration of this disease, I have recently seen in consultation with Dr. Allen, of New Bedford, a married woman of forty-seven, who has for a long time suffered from severe pain just above the insertion of the right deltoid. It has gradually increased and is now present, not only on movement, but also when the arm is at rest. There is moderate tenderness of this region. She can raise the arm to the vertical position by a sinuous movement, but it cannot be raised directly outward, either actively or passively. This offers an unusually exact example of subdeltoid bursitis, since the lesion is extremely limited; probably something in the nature of a fringe, is the diagnosis of Dr. Codman, who advises operation.

Another variety of painful affection of the upper extremity, sometimes mistaken for neuritis, is the *occupation neurosis*. The term "writer's cramp" has brought the *cramp* of occupation neurosis into such undue prominence that the more frequent *pain* is relegated to com-

parative obscurity; hence the pain of occupation neurosis is frequently misinterpreted. Continuous overuse of a part produces pain far oftener than cramp.

This pain, though seated in the overused part, represents, not merely muscle pain, but, as Gowers has pointed out, rebellion on the part of the exhausted cerebral centers. This explains the rapid appearance of the same symptoms when the attempt is made to do the work with the other arm. The pain, at first present only on movement, may finally appear when the arm is at rest, sometimes continuous, sometimes paroxysmal, not infrequently accompanied by tenderness. A common characteristic is the inability to place the arm in a comfortable position even in bed. Electricity and massage are the usual resources. Electricity is of no use in these cases, and massage, except of the most gentle variety, oftener aggravates than relieves the discomfort. The only effective treatment is abandonment of the occupation for months, and rest — generally absolute rest, even with the arm in a sling, and sometimes with the addition of a light splint in the early part of the treatment. When the affection is well established, a single attempt at work may undo the result of a week's rest. This affection is not limited to the followers of trades, but appears in women who constantly sew, practice upon the piano and the like, and sometimes results from the simplest habits unconsciously prolonged. It is more common among the neurotic, partly because of their lesser resistance, and partly because of their obsession to finish at any cost what they have undertaken. Nor is the history of the patient always to be relied upon. In the case of one lady who has long suffered extreme pain, formerly accompanying movement of the arm, now practically continuous, with no physical sign to explain it, a negative reply was given to all my inquiries regarding overuse of the part. The enlightening statement of her husband that, to the distress of the rest of the family, she sewed day and night, she indignantly denied, saying she only took short stitches anyway. Further questions brought out the fact that she did this simply because she could no longer take long ones!

It is peculiarly hard to urge even temporary abandonment of the employment upon which the patient, perhaps his family, depends, but the wayside of every profession and of every trade is strewn with wrecks, who seem to

"Cry aloud in every careless ear,
'Stop, while ye may; suspend your mad career;
O learn from our example and our fate,
Learn wisdom and repentance ere too late.'"

In every case, then, of intense pain in the arm without obvious cause, careful search should be made for overuse of the part, before resorting to the diagnosis *neuritis*, a diagnosis which, in the majority of cases, without known infection or other toxic influence, is generally only a cloak for our ignorance of the real pathology of the case in hand.

Coming now to the lower extremity, the most common source of pathological misconception along these lines is *sciatica*. Pain and tenderness along the course of the sciatic nerve placed this disease long ago among the disorders presumably completely understood though generally intractable. It was thought quite a step in the right direction to suggest that the affection of the nerve was a neuritis rather than a neuralgia. In this connection it was noted that *sciatica* was often accompanied by lumbago. But it was left for the orthopedist to teach us that in the majority of cases the trouble with the nerve is merely secondary to, and a symptom of, disease of the spinal column at the point of emergence of the nerve-roots — most commonly an osteo-arthritis or a sprain of the sacro-iliac synchondrosis, as taught by Goldthwait. This can be, as a rule, easily demonstrated by making the patient bend the back forward, backward and sidewise. One or more of these movements will show marked rigidity of the lower spinal column, and elicit pain in that region. Curiously enough, prior to this realization, the most satisfactory treatment of *sciatica* by neurologists consisted in strapping the back in case of lumbago, or Dana's rest in bed with splint reaching from the leg to the armpit and secured about the *trunk*.

So many cases of otherwise intractable *sciatica* have readily succumbed to orthopedic treatment (oftenest mechanical support to the spinal column) that recourse to the orthopedist for this symptom has now become, with some neurologists at least, a routine practice.

One of the most important directions in which the orthopedist has helped the neurologist, and the neurologist in turn has frequent opportunity to help others, is in calling attention to the symptoms of flat foot. My own attention was called to this subject in a striking manner. A recurring pain in the inside of the right knee had been for years attributed to an old injury to that joint. An increase of the pain in recent years led to the suspicion that rheumatism (another stock diagnosis) had been added to the results of trauma. Flat foot had been considered, but eliminated, because *the pain often persisted during rest*, even in the recumbent posture. This is a very misleading sort of reasoning to apply to pain; it reminds one of the argument of the lawyer called to a client in jail.

"Why!" he exclaimed, "they cannot arrest you for that."

To which the client replied, "But they have."

In the case in hand rheumatic and other treatment having proved ineffectual, a visit was made to the orthopedist, who promptly pronounced the pain that of flat foot, a diagnosis substantiated by the fact that the patient, who had limped to his office, walked back in comparative comfort with the simple aid of a temporary support to the arch. This patient, after using for a time a plate and exercises, finally needed no further treatment than the use of the Thomas heel.

While the commonest seat of pain from flat foot, other than in the foot itself, is perhaps in-

side the knee, this diagnosis is always to be considered in case of unexplained pain occurring almost anywhere in the lower extremity; for example, on the outer aspect of the thigh, and even in the small of the back. A history of increase of weight, especially combined with excessive exercise, favors the diagnosis; signs of sluggish circulation in the foot with puffiness below the outer malleolus tend to confirm it.

The aim of this outline sketch is not so much to present new subject-matter as to emphasize the practical importance of bearing these diagnoses constantly in mind. The trouble, I find, is, not lack of familiarity with the fact, for example, that neuralgia may come from the teeth, or pain in the knee from flat foot, but lack of readiness in application of this knowledge to the particular case, and lack of persistence in the pursuit of these etiological factors in the face of contemptuous indifference on the part of the patient, and notwithstanding the assurance, by those apparently better qualified than ourselves to judge, that the suspected organs are not the source of the symptoms. I wish further to emphasize the fact that these conditions are not merely of academic interest, but are constantly recurring in the daily round, though unfortunately quite as often overlooked as recognized, in spite of, perhaps partly on account of, exceptional skill and learning on the part of the practitioner.

I have by no means exhausted the list of everyday disorders frequently misinterpreted, but hope that what I have mentioned will constitute an effective plea for the independent investigation of each case in place of blind reliance upon time-honored diagnoses.

MEDICAL NOTES ON NORTHERN ALASKA.

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THE following are some general impressions gathered in the course of a year spent on the north coast of Alaska. The inhabitants of this country consist of Eskimos and a few white floe whalers and traders, mostly married to native women. Whale ships wintering north usually stop at Herschell Island, a place I did not visit.

In order to understand the course of disease amongst these people one must know something of their general scheme of life. In winter a typical Eskimo family lives in a house or igloo, made of logs, or stones covered with sod, and later snow. To economize heat this house is so low that the head of a tall man, kneeling, almost reaches the roof; and in size it is no larger than is necessary to contain the family and a few household utensils. The level of the floor is below the ground level outside. A long, low passage — that one must crawl through on one's hands and knees — having two or more doors in it, communicates with the exterior. Light is admitted through the roof, by a small window, covered with the peritoneum of the seal. Some air may enter