Cephalalgy and massage / by Gustaf Norström.

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THE FACULTY OF STOCKHOLM.

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In April, 1885, I published my first work on the treatment of migraine by massage. In this little work, containing thirty-six observations of cases, of which most were personal ones, and the others borrowed from Henschen, Wretlind, etc., I tried to show that many cephalalgias, generally collected under the same generic name, were secondary neuralgias, starting from the deposits of chronic inflammation of the muscles of the neck, having most often their seat on a level with their insertions, but sometimes also in their body. In order to make my demonstration more decisive I recalled the fact that painful affections of different regions do not have any other mechanism. I recalled observations of sciatica dating from several years which had been cured by making muscular inflammations of the gluteal or pelvic-trochanteric muscles disappear. The same conditions had been reproduced in migraines; the pains were extremely violent, irregularly localized—subject to exacerbations which could not be foreseen and to attacks with irregular periodicity, like those of neuralgia. Massage of the inser-

tions to the cranium, or of the fleshy part of the trapezius, the sterno-cleido-mastoid and other muscles of the neck, performed for a time sufficient to remove those inflammatory deposits, caused the neuralgia to disappear. I was, then, right when I added to already described varities of migraine one of inflammatory and muscular origin and proposed for it a curative and causal treatment.

My work was appreciated in different ways. Some gave only the title of it followed by a big mark of interrogation or exclamation, which was incontestably very witty; a critic made the remark that the blood in the brain came from the heart and not from the periphery, as I had written. I was long ago aware of this, but as I quoted Galen, I was obliged to repeat what he said. Besides these remarks, other more serious ones attacked my theories themselves; the facts which I brought forward were not questioned, the announced results were admitted as true, but I was reproached with having mentioned migraine in the title and having given observations of cephalalgy which had nothing in common with it. This reproach was the best founded of them all. In speaking of migraine I used the patients' expressions, but these are not necessarily nosographs, and being aware that this was to a certain extent improper, I used the word cephalalgy in my observations in indicating the principal characters of the pain.

I am consequently not desirous of keeping the word migraine. I am so little desirous of it that I will try to show what pathologists now mean by it and to place opposite to it the phenomena noticed in the new observa-

tions which I publish. This will be the best means of enabling the reader to judge if they are migraines as he understands them or if they are something else.

It is not only in order to give some unpublished facts that I publish this work. The first time I tried to show the relation of causability existing between the cervical muscular inflammations and cephalic pains, to prove that with a methodic treatment all might be cured. I believe I have attained my object, but when it has been shown that a medication is legitimate all has not been said with respect to it. I have never sustained the extreme theory that all extra-cranial cephalalgias are necessarily of muscular origin, that all limited chronic myositis of the neck produce paroxysmal pains with migrainous character; that when both indications are realized, one always succeeds in overcoming them by the procedure in question, that massage is an infallible medication which has no contra-indications, no failures. If I had said this I would have committed serious mistakes. However convinced one may be, one may never reason in this way, experience would soon open our eyes and show that if faith has formerly been sufficient to transport mountains it is not always sufficient to cure.

Failures are also good for something. They oblige us to go back, to scrutinize in a more minute way particularities, to find out why that which has so quickly and completely cured in one person, has not given any results in another one. When we have several times done this, we will be quite able to keep equally away from blind confidence and discouragement, to put in their place ex-

perience gained by reasoning. This is what I propose myself to do in this pamphlet.

§1.—*Cephalalgias treated by massage. Their comparison with migraine. What is understood by this word. Observations of different types of cephalalgy; their analysis.*

I feel inclined to ask those who have reproached me with having confounded with migraine headaches which differ from it as well from a clinical as from a pathogenic point of view. "I acknowledge the value of your objection and I wish to take it into account, but give me the elements of comparison and the exact description of true migraines. This will exempt me from wasting the patient's and my own time, if massage can be of no use against it." The interlocuter to whom I should offer this argument would probably be embarrassed how to answer. An obstacle beyond objective control opposes itself to the study of these affections, which consist of almost inexpressible sensations. How are we to define them? What is migraine, not in its essence, but in its phenomenology and how are we to distinguish it from so many cephalalgias with which it has such apparent affinities? Thus Lasegue expresses himself in 1873. The difficulties of which he spoke did not only belong to that time, they have not yet been cleared up. I have before me a small book on migraine, published three years ago, to which a

prize was awarded by the Academy of France.[1] The author has done his utmost not to give to his work a personal stamp. It is a very precise and methodical account of the state of science at the moment when it was written. In spite of the clearness of the statement and the discussions it is easy to notice that the picture of migraine is not as distinct as some might wish it, that the clinical characteristics are not precisely given.

The aggregation of symptoms described under this name includes:

1° A cranial pain of which the precise seat and objective characters change in different persons.

2° Frequent gastro-intestinal disorders, but which are not necessary to constitute the disease.

3° Objective phenomena of which the most remarkable are redness or paleness of the face.

All this takes place at once or accidentally in the shape of an attack. These attacks come back regularly; if they are more than one a week or less than two a month, it is not migraine. This is a rapid sketch of the disease. Let us add to it more or less bright colors borrowed from the patients' descriptions, the study of accessory phenomena, as irregularities at the beginning, disturbances of innervation, phonation, respiration, menstruation and we will have a complete list of what is described in all pathological books. One does not even agree on the word. Mr. Thomas says: "The word migraine comes in straight line from Galen." The Germans have preferred to keep

1. Thomas "La Migraine," Delahaye et Lecrosnnier, 1887.

its original form and say hemicrania. This is a pity, because it seems to convey the meaning that the pain is localized in one of the halves of the head while it so often is extended to both.

Do we find more unanimity as regards the pathogeny? We only have to read the chapter of the book in question to be edified. There are tempting theories. Ardent pleadings have been written in favor of one or the other. Thomas has meditated about them and frankly exposed them. One might think that he approves of them all, but when he comes to the critical appreciation, the improbabilities are accumulated, the contradictions stare one in the face and from all this framework there only remain hypotheses without any proofs, the analysis of which is often cruel.

After having argued and considered everything, the author, by exclusion, arrives at such a timid and doubting opinion that it is difficult to undertake to prove that it is false. All probabilities are in favor of a neuralgia having its primitive seat in a definite branch of the trigeminal nerve. The irritation is later on propagated to the fiber of the sympathetic nerve and perhaps to the cerebral substance. Multiple causes can produce the attack of a constitutional nature; rheumatism and gout in particular prepare the ground. Which modifications have they impressed upon the nervous elements? This we cannot tell.

Is this, then, that classic neurosis with such striking symptoms which I was reproached with not recognizing?

An impartial author has the courage to go to the bottom of everything and to examine it without preconceived

ideas. He comes to the conclusion of a definite neuralgia of which the attacks are increased and transformed as they go on. Lasegue said that it is almost impossible to fix the phenomenology of migraine; Thomas is not far from saying that migraine does not exist.

We are not going to take these difficulties step by step and to right what nature herself has not determined. We do not know whether in pathological works of the future the same thing will happen to this symptomatic complexus as to apoplexy and hemiplegia; that is to say, whether it will be studied simply as a symptom instead of being described as a disease. This eventuality does not preoccupy me very much.

I give here some of the many cases which I have had the opportunity to treat with massage; they will be sufficient for me, because as I do not want to write a long essay, I have not tried to collect the elements of statistics. I will describe the cephalalgias as they manifested themselves to me. My readers may call them how they like best. If by chance the patients present symptoms similar to those which I relate it is of importance to remember that in these cases there are often small deposits of inflammation in the nape of the neck, and that if these happen to disappear the pains also have a chance to do the same.

I have first to speak about a person treated several times by me for rheumatic affections in different localities and who suffers from headache since about a year. The pain, more dull, is relatively supportable. It is almost constant, but leaves him free at night. (Obs. I.)

In all the other patients there was a common characteristic—the accidental exacerbation or the unexpected appearance of the pain in the shape of an attack. All these had been regarded as suffering from inveterate migraine. The attacks were of different kind and form, according to the person.

A man, fifty years old, who had suffered for fifteen years, had attacks belonging to three different types. (Obs. II.)

1° Sharp and quickly recurring attacks. These were not the most painful ones. The pain began suddenly, at any moment of the day, in the occipital region on the right side. These attacks lasted forty-eight hours. They were violent enough to make all work impossible, but they were attended with neither vomiting nor change of color of the face.

2° In the interval and especially in cold weather, in the autumn, during the winter and at the beginning of spring, the second kind of attacks came on. They were more like ordinary paroxysms of migraine than the others. In the morning the patient feels a heaviness in his head, then the pain, starting from the occipital region, is by and by increased and attains its maximum towards the evening. With the first kind of attacks sleep is impossible; with the second kind sleeplessness prevails. The following day the attacks are over. As long as they last the face is red and the pulse accelerated.

3° This pain, less frequent and more regular than the preceding ones, was only produced under the influence of draught. It remained localized to the temporal region.

The form and the cause which provoked the attacks of the last two kinds would be sufficient to make one think of rheumatism. This was complex, as may be seen in reading the observation.

There were palpable alterations in different localities and it is probable that the generating cause of the attack did not always start from the same point.

In another patient, fifty-five years old (Obs. III.), there were attacks almost always four times a month. These did not present the same dissimilarities and irregularities as in the case we have just seen. What constituted still another likeness with traditional crisis of migraine was the almost constant existence of nausea which the cephalalgy was attended with.

Besides, there are, perhaps, not two cases in which the symptomatic tables are identical.

Another patient feels an acute pain in one side of the nape which is propagated forwards towards the forehead. In consequence of one of the symptomatic paradoxes of which we have already seen examples, this attack which so little resembles ordinary migraine, is attended with vomiting and apparent slight paralysis of the right arm, which the patient has difficulty in lifting. (Obs. IV.).

This case presents one of these collections of symptoms which is sometimes designated by the name of opthalmic migraine and which one would like to separate completely from the classic hemicrania. The attacks are attended with other pains equally paroxysmal in the loins and the right arm. (Obs. V.).

A lady twenty-six years old is affected especially by in-

traorbital pains. Here it is equally well to take notice of the peculiarities. The patient complains of a pain in the forehead, which radiates to the bottom of the orbital cavity. She has tingling in her ears, the face and scalp are burning. This person has lost a part of her hair in the parietal region. (Obs. VI.)

Mrs. C., forty, was affected with chlorosis in her sixteenth year. It left behind a paroxysmal cephalalgy, which has increased since then. She speaks of migraine and the expression is not too improper. (Obs. VII.).

In a man, thirty-four years old, the trouble consists in a frontal pain, recurring every fortnight. (Obs. VIII.)

In a woman, twenty-eight years old, a sort of lightning starts from the nape, runs through the head in all directions, radiates to the orbital edge and is attended with an itching of the conjunctival mucus membrane. These crisis sometimes last seventy-two hours; they are particularly violent at the menstrual periods. (Obs. IX.)

Finally we have to do with a young Italian lady, aged twenty-four, whose attacks presented a very violent character. They were limited to the right side and seem lately to have increased in number and in intensity; violent pain on pressure on the cervical ganglia of the sympathetic nerve. (Obs. X.)

Out of the ten patients whose attacks we have studied, only four had a habitual dull cephalalgy besides. In a girl twenty-three years old, of whom we will speak later, and whose attacks appeared after a long and fatiguing voyage, there were generally painful headaches, attended with a sensation of frontal constriction and heaviness

of the eyelids. All this increased at the menstrual period without taking a distinct paroxysmal character. The attacks came on after anything sufficient to produce a marked nervous shock. (Obs. XI.)

I dare not affirm that in this case there was not a nervous substratum and that hysteria had nothing to do with it. It has, however, alone contributed to give to the attacks their own physiognomy, without producing them, as they have disappeared without leaving any trace, together with the deposits of myositis

To these observations related in the French edition of my work I want to add three other cases which I have lately treated, as they are not only interesting, but two of them execeptionally serious.

First, we have to do with a lady fifty-five years old, who has suffered from headache for thirty years. Until the end of the climateric age, the pain has been relatively tolerable. After that period she suffered more. The pain, acute and shooting, was violent enough to oblige her to stay in bed. It begins on the right side, slowly going to the left. At the same time she complains of a pain in the temporal region. (Obs. XII.)

This case concerns a young girl of fourteen years. The pain, which is of a dull character, has been almost continuous for two years. It occupies the whole head and is always aggravated by studying and before the menstrual period. (Obs. XIII.)

The last observation relates to a patient who has suffered from migraine, or neuralgia of the head, for thirty-five years. The last seven years the attacks have

been particularly violent, so that they rarely left the patient free from pain at night. The right side is most often affected. (Obs. XIV.)

Most often the causes which produced the attacks were those which are noticed in most affections of rheumatic nature; a gust of wind, the damp season, the approach of snow draught. All this agrees with what we actually know of the nature and etiology of localized chronic myositis. It is in these conditions that the diathesis may be regarded, as Helleday expressed himself, as a real barometer.

Sometimes, however, a change of climate, a violent emotion, a moral or physical fatigue, as, for instance, waking, a journey, a continued attention of the mind (as going to museums), the stay in a locality where excessive heat is added to the bad air, as in theaters and big shops; yes, even a change of the ordinary habits of life are often sufficient to provoke a crisis.

Most often we find in the same person several causes able to provoke it.

Let us now see the alterations found in palpating the muscles and particularly their insertions:

Obs. I. Resistance of the size of a nut in the belly of the right splenius, puffiness of the scalp in the neighborhood of the point of emergence of the lesser occipital nerve. On the left, swelling and pain on pressure on a level with the insertions of the trapezius.

Obs. II. On the right, behind the mastoid apophysis, marked induration corresponding to the muscular insertions. Other induration of the trapezius correspond-

ing to the middle of the nape; pressure on this part provokes pain on the vertex and in the orbit. Swollen and painful glands in the neighborhood. Pain on pressing on the upper cervical and the middle ganglia of the sympathetic nerve.

On the left, symmetrical indurations corresponding to the insertion of the sterno-cleido-mastoid muscle. Resistant nodule in the substance of one of the scaleni, more marked on a level with its lower insertion. Pain on pressing on the upper and middle cervical ganglia.

Obs. III. On the right, induration in the neighborhood of the cranial attachment of the splenius; resistance in both sterno-cleido-mastoid muscles, a little below their insertion on the mastoid apophysis. Deposit of induration along the attachment of the trapezius to the skull. Tumefaction of its aponevrotic sheath in the region of the occipital protuberances. Sensibility along the supra-orbital nerve in the right frontal region.

Obs. IV. On the right, one part sensible to pressure behind the mastoid apophysis, another part along the trapezius. On the left, painful swelling on a level with the cranial attachments of the splenius, the trapezius and the temporal muscle.

Obs. V. On the right, induration of the size of an almond, corresponding to the cranial attachment of the splenius. Tumefaction and sensitiveness to pressure corresponding to the upper insertion of the sterno-cleido-mastoid muscle; same swelling in the temporal muscle.

Two of the lymphatic ganglia of the neck are swollen

and painful. The middle cervical ganglion of the sympathetic nerve is swollen and sensitive to pressure.

On the left, pain on pressure on a level with the upper cervical ganglion, less on the middle one.

Obs. VI. On both sides, induration in the upper edge of the trapezius. On the left, induration corresponding to the mastoid insertion of the sterno-cleido-mastoid muscle.

Obs. VII. On the right in the upper part of the trapezius, muscular induration of the size of a little nut. There is a sensitive spot along the scalenus medius. Middle cervical ganglion swollen and tender. On the left, in the thickness of the trapezius, small induration of the size of a nut (cervical part). Another tumefaction corresponding to the insertion of the sterno-cleido-mastoid muscle, oedema of the skin and of the subcutaneous cellular tissue. Infiltration of the scalp in the occipital region.

Obs. VIII. On the right, pain on a level with the cranial attachments of the muscles of the neck, at the extreme occipital protuberance and at the mastoid apophysis. Both ganglia of the sympathetic nerve, especially the middle one, are enlarged.

On the left, tumefaction and induration on a level with the scalenus medius. Lymphatic ganglia tumefied and sensitive, middle cervical ganglion the same.

Obs. IX. Myositis of almost all the muscles of the neck, especially marked on the outer edge of the cervical part of the trapezius and on the scaleni, the temporal muscles are equally affected.

Obs. X. Behind the mastoid apophysis, painful tume-

faction; same lesion on a level with the cranial attachments of the trapezius.

Obs. XI. The scalenus of the right side is the seat of a chronic myositis. Several lymphatic ganglia swollen.

Obs. XII. Voluminous deposit of myositis behind the right ear in the sterno-cleido-mastoid muscle; also in the trapezius on the same side. Swelling of all the muscles along their attachments to the cranium. Upper attachment of the temporal muscle swollen.

Obs. XIII. Scalenus and trapezius affected especially on the left. In the latter one on the same side, next the median line. On the right, smaller deposits of inflammation; has its seat higher up than on the other side.

Obs. XIV. On the right, voluminous induration in the sterno-cleido-mastoid muscle, near to its upper attachment. Resistance of the size of a small almond in the lower part of the scalenus.

The upper attachment of the temporal muscle is swollen and sensitive to pressure. Sensitiveness also of the supra-orbital nerve. The first ganglion of the sympathetic nerve tumefied. On the left, swelling of the trapezius and splenius at their attachment to the cranium.

I have already said in my "Traité de Massage" and in my first work on the actual subject, that I considered these limited deposits of muscular inflammation as partial chronic myositis, corresponding either to the insertions or to the fleshy part of the muscles. It seems useless to reproduce here the considerations which I then developed in support of this opinion. I have also said that I attributed the disorders in question to rheuma-

tism; that authors had called these chronic inflammations muscular rheumatism without any more precise designation. It is possible, after what we have seen, to find another unexpected similarity between the cephalalgias which we are studying and migraine. Mr. Thomas, after a minute study of the professed opinions, denies the direct transmission of the neurosis from the person suffering from migraine to his children; on the contrary, he admits without hesitation that these inherit predispositions, among which he places rheumatism first. This is also the case with the cephalalgias of which we are speaking. Our patients suffer from rheumatism through heredity; in several of them the localizations on the muscles of the nape are neither the first nor the only ones. It has often happened to me that I treated persons for cephalalgy with paroxysms, in whom I had formerly performed massage for affections of the same origin in the muscular masses of the limbs or the trunk, or to learn, when questioning the patient, that he has from time to time suffered from a pend on heredity; they are capricious and may depend on some organic or accidental circumstances.[1]

In looking at the list of alterations which we have given, it is possible to see that the seat which is preferred by the chronic myositis is the cranial insertion of the muscles of the neck, the splenius, sterno-cleido-

1. Sometimes the rheumatic manifestations in other parts of the body are so little marked that one is inclined to deny their existance; it is only in carrying the investigations further that one almost always ends by discovering some vague, hardly determined pains (latent rheumatism.)

mastoid, trapezius, etc., but they have also been found on a level with the insertion of the temporal muscle, either on one side only or on both. The swelling is in this last case generally limited as regards its breadth; it extends only about one or two millimeters below the upper attachment. There are cases in which only the anterior part is affected, while in others, most often, it is the posterior one. I have never found myositis in the body of this muscle. Although generally the swelling is not very marked on palpitation, the patient feels often a very violent pain on pressure. Sometimes a few moments of rubbing are necessary to provoke it.

The presence of deposits on the edges and in the body of the trapezius, along the sterno-cleido-mastoid muscle, the splenius and the scaleni is rather frequent. It would be a serious mistake to suppose that, when one has discovered a myositis, all is over, and that it would be superfluous to carry the exploration farther on; one would be exposed to painful deceptions in the course of the treatment.

It often happens that all inflammation is not limited to the muscles, that there is infiltration and pain on pressure, swelling on a surface of about one or two centimeters at one or several points of the scalp. It is generally found in the neighborhood of the external occipital protuberance; sometimes there is some even on the vertex. I have met with real embossments of the scalp, painful on pressure. In a case of this kind, which I have had the opportunity to treat last year, it was possible to perceive the inequalities only by inspection of

the region. They were, as they generally are in similar cases, rather long before disappearing, and only after energetic and prolonged massage. For about three weeks the condition remained stationary; this persistence frightened the patient all the more. When the amelioration became evident in the scalp, the lymphatic ganglia of the neck on the same side became affected. I reassured her and continued the treatment. After six weeks she was cured.

One also meets, but more rarely, with true organic alterations in the subcutaneous tissue of the nape, which can even become of considerable consistency. Very often confounded with muscular inflammations of the same region, they are easily recognizable by being able to seize them between the thumb and the forefinger and to displace them.

The nerves can be affected in several ways. Have we always to do with real neuritis? This is not probable. It is sometimes rational to admit a compression of the nervous filaments by muscular deposits subject to variations in volume in proportion with the particularities of the morbid process. The inflammation is probably in some cases also propagated to the sheath of the nerve, or this is affected quite independently and particularly where the nerve is coming out of the cranium or in its neighborhood. It is not rare to meet along the supra-orbital nerve, especially in the neighborhood of the orbit, a puffiness or induration distinctly perceptible on pressure, or even by sight, and very painful. All this probably results from a perineuritis.

In this respect no nerve of the scalp presents any immunity. All may be affected, only along the supra-orbital nerve the alterations are more easy to discover than along any other.

We must not suppose that all supra-orbital neuralgias depend on an inflammation of the indicated nerve or its sheath. Sometimes this kind of neuralgia is attended with pain in the sphere of the occipital nerves, pressure along these nerves producing no effect. Everything disappears in this case when the deposits of myositis of the nape no longer exist.[1] There is [redacted] cause to suppose:

First, That there exists either only a compression of the occipital nerve (communicating with the supra-occipital one) from the deposits of myositis in the muscles of the neck or a real inflammation of its sheath (perineuritis), limited to that part of the nerve where it starts from the cranium and having the same origin as that which had provided the muscular inflammation (rheumatism.) Secondly, that the transmission to the supra-orbital region has taken place through collateral or reflex channels.

Besides, the same thing rather frequently happens in other regions. I said with respect to this in my first work on migraine: "Helleday relates in one of his observations that a patient, having stiffness and sensitiveness to pressure in the hip, at the same time complained

1. We have treated a certain number of cases in which cephalalgy had distinctly the character of a supra-orbital neuralgia. There were deposits of myositis at the nape. In making them disappear through massage, the neuralgia was cured.

of a violent pain on a level with the ankle bones and on the external part of the leg." He says: "I have sometimes noticed that massage of the glutens medius on a level with its insertion to the crista ilii makes the pains disappear."

I have several times been able to make the same remark. A patient complained of violent sufferings in the calf and the foot along the two branches of the sciatic nerve; pressure did not produce any effect. All depended upon a limited myositis of the glutens medius, which was easily cured with massage.

I have at different times noticed the existence of a pain and swelling rather marked on a level with the upper and middle ganglia of the cervical sympathetic nerve. This fact is interesting. Beard, Rockwell, Brunner, Benedict, had already noticed it. It was the corner-stone of Dubois-Raymond's theory of hemicrania; the sinking of the eye in the orbit, the hardness of the temporal nerves, the anaemia of the face were, according to him, consequences of the same process; vomiting depended on variations of intra-cranial pressure. In all this only one single organ was the cause: the cervical sympathetic nerve. The sensitiveness to pressure on the ganglia, the almost complete disappearance, when the attack was over, proved it. I have already said that I did not intend to undertake a nosological discussion on the nature of migraine. I only state that in my observations there were inflammatory lesions in the muscular system, in some of them also of the nerves of the scalp, the forehead and in the upper and middle cervical ganglia.

Sometimes the attacks presented various types, so that with some good will it would have been possible to connect some of them with the muscles and cerebro-spinal nerves, the others with the sympathetic nervous system. (See Obs. I.) I have not even believed that this one was a noli me tangere. I have massaged painful ganglia and I have had good results; Professor Rossander, of Stockholm, was the first to call attention to this point.

The essentially chronic muscular inflammatory process is often not perceived at its origin. We must not think that the patients have been affected the same day as they have begun to suffer. Taking into consideration the slow development of the chronic myositis, everything tends to make us believe that a longer or shorter period has elapsed before this moment; but we have no means to know the duration of the period of indolence and tolerance.

Propagations to the lymphatic system are not rare. We have often found that the ganglia, especially those of the nape, were swollen; the adenitis was chronic, not of the kind to make one fear suppuration. There was neither redness of the skin nor pain on pressure, nor softening of the pulp of the ganglia; generally all disappeared spontaneously after the cure of the myositis. We have a unique process with divers localizations, the medication directed against it ought to be useful in all cases, the way of applying it is the only one which changes..

Let us sum up. We have seen: First, Affections of the cranial portion of the head in which the pain contained two elements; a continuous element, not very painful and

inconstant; a paroxysmal element of which the characters and intensity were very variable and in many cases like that what authors have described under the name of attacks of migraine. Second, Alterations perceptible on palpitation and containing deposits of muscular inflammation, corresponding to the insertions or to the fleshy part of some muscles of the nape; puffiness and isolated or multiple indurations of determined regions of the scalp; sensitiveness to pressure and pain along some nervous trunks, swelling and pain on pressure of both upper ganglia of the cervical sympathetic nerve, either on one side or on both; indolent swelling of certain lymphatic ganglia of the neck.

Before ending with this question, it seems well to me to remark that objective phenomena are not those which we see in spite of ourselves, as I might say; that they ought to be sought for and that this search presents some difficulties. No doubt when we have protuberances of the scalp, indurated cords along the nerves, plates of the consistency of leather in the muscles, they are easy to find. But at the beginning the alterations are less marked; we must get used to some delicacy of touch in the palpation of the muscles; it is by this means that we will succeed in discovering inequalities, simple differences of elasticity of one point from another.[1]

1. It is well to examine the patients during an attack. There exist deposits of inflammation which in spite of a very careful examination cannot be discovered, but which are not long before appearing and becoming easily recognizable as soon as the patient is under the influence of an attack. In neglecting to observe this rule we might never find them or only by chance later on at a period, when the treatment is in other places very advanced. This circumstance would of course be very prejudicial to the cure.

Although some energy is sometimes necessary, especially in old myositis, we ought to proceed gently and methodically and render the contact of the hand tolerable to the patients, which is not always easy. The roughness of the masseur can provoke fibrilar contractions and make us believe that lesions exist in places, where there only is a slight and temporary modification of shape, sometimes some swelling of the sub-occipital ganglia.[1]

Let us now try to come back to the relation which exists between objective and subjective symptoms, as Vretlind, Henschen and Helleday have tried to establish it and as we have tried to show it ourselves.

Neither these observers nor I have anything else in view but extra-cranial secondary cephalalgias. Paroxysmal headaches belong also to the symptomatic triad of cerebral tumors; old people whose convolutions only receive an insufficient quantity of blood have headaches; their habitual cephalalgias are sometimes interrupted by attacks which they call migraines; all this is known. These pains have nothing in common with those of which we have spoken and we have never thought of treating them by the method in question. We then suppose, this goes without saying, that before beginning massage the masseur has made a careful examination and a good diagnosis.

One often makes an objection which at first sight

1. The confusion of these ganglia with deposits of myositis is possible after only a superficial examination, but they are easily displaced and roll under the fingers, which makes distinction easy.

seems to be of some importance. Why do you connect parietal or frontal cephalalgy with myositis of the trapezius and the sterno-mastoid muscles, when the patients do not suffer and have almost never suffered in this region? The same objection can be made with regard to other diseases.

In some affections the spontaneous pain has not always the same seat as the lesion.[1] It is the rule in those which we are studying, its absence from the nape can in no cases be an objection to our theory.

On the other hand let us remember that more than once pressure on the indurated and habitually indolent deposits in the neck provokes the same kind of pains which have their seat in the same localities as during the attack. It has often happened to me to produce pain on the vertex and as far as in the bottom of the orbit by pressing on the muscles of the nape. The same has happened to me, although very rarely, in pressing on deposits situated lower down towards the shoulder.[2] There is no inversion of seat; if the myositis is on the left, it is on the left side that the pain is produced quite as in spontaneous attacks; the same is true in the ganglia of the sympathetic nerve.

This regularity nearly always surprises the patients,

1. In support of this fact, I have already related how neuralgic pains of the calves can have no other origin but a muscular inflammation of the glutens medius.

2. Patient are often rather sceptic when you tell them that their headaches have their starting point in the muscles of the nape. They declare that this is impossible as they feel nothing in this region.

gives them confidence in the method and makes them docile auxiliaries to the physician.

As the treatment goes on one has often the opportunity to make another remark which is not devoid of interest. It often happens that at some moment it seems to the patient as if everything gained heretofore by treatment had agin been lost. The cervical deposits diminished, became less and less sensitive to pressure, but suddenly one day the patient endures the manipulation less well than the day before; he complains of local and radiating pains comparable to those of the first days of massage; we may foretell an attack for the following day or the day after. It will, perhaps, be less long and painful than those which had preceded the treatment, but it will almost always be as distinct.

Finally, the curative action of the indication is the last and decisive argument in favor of the existence of a relation of cause to effect.

To extra-cranial cephalalgias accompanying phenomena may be added which progress and often disappear at the same time as the others do. These are neuralgias of one branch of the trigeminal nerve other than the already named in the supra-orbital and occiptal nerves. I have seen it in the auriculo-temporal, nasociliary branches, etc. Dr. Rossander a few years ago brought forward very curious observations on tic douloureux. He obtained in some cases a radical cure by massage of cervical ganglia of the sympathetic nerve, which had become swollen and painful.[1]

1. Hygiea, 1886.

I have myself obtained good results by the same procedure; they will generally be still more satisfactory, if to the frictions on the sympathetic nerve one adds frictions and trepidations along the affected nerves.

Other phenomena more disagreeable than painful can be made to disappear in the same way. I have seen tingling in the ears cease after the curing of a headache; a person who had been deaf for several years was cured. Another patient whom I have treated lately and who complained for more than a year of hard hearing on that side of the head where she suffered particularly and where the muscular inflammation was more developed, has got her hearing back again at the same time that her headache disappeared. A third one lost a trouble consisting of repeated movements of deglutition. We have said nothing of cephalalgy due to growing, about which an interesting memorial was published by Blache a few years ago. Authors do not agree on its origin and nature. Ollivier believes that in many cases a hereditary nervous substratum exists, that the headache corresponding to the growth is a precocious hysteriform manifestation. My personal experience does not allow me to give a precise opinion; it is, however, probable that all cephalalgias which come on at the end of childhood have not the same cause; that some of them are very like those which we have described. In some cases I have found chronic inflammation of the muscles of the neck and I have succeeded in curing or improving the patient's state by making them disappear; in others I have obtained nothing, although local changes in the consistency made

me expect a better result. All this shows that varieties exist among cephalalgias due to growth. Those in which the treatment was ineffectual, and these are the less numerous ones, probably belonged to the cephalalgias which Mr. Oliver connects with general neurosis.

§ 2. *Practical remarks on the application of the massage. Which are the cases in which we have the most or the least chance of curing ?*

One would be wrong, I repeat, in drawing from what I have just said exaggerated conclusions and believe that all myositis of the neck produce cephalalgias, that all headaches originate from muscular inflammations. I have had the opportunity to treat cases of old torticollis with massage, and I have rather often found inflammatory deposits similar to those which I have described on different points of the trapezius; the patients had never had any headaches.

Relapses of once cured headaches are not very rare. When they take place, new lesions are found or the former ones have been partly reproduced; the same thing happens in the motor sphere as in the sensory one; one has to do with an irregular process, subject to suddenly starting and stopping.

Why do identical anatomical alterations give rise to such different symptomatic manifestations? This is difficult to tell. They perhaps depend on the degree of irritability of the neighboring nervous terminations.

In every instance we meet the same kind of anomalies. Since some years one has described a very painful neuralgia which is exclusively observed in old persons and adults having lost their teeth; it is for this reason called the neuralgia of the toothless. It is far from being a fatal or even frequent consequence of the caducity and disappearance of the dental system. One might answer with similar arguments to an objection which has often been made to the doctrine of cephalagias of muscular origin. You are in presence of an alteration which does not give way, which will always preserve its primitive character. You cannot expect a spontaneous healing of the tissues. It is difficult to understand how attacks, irregularly intermittent, can constitute the most important clinical phenomenon of the disease. The contradiction is flagrant: to fixed and persistent anatomical alterations would corrrespond attacks which have opposite qualities.

To answer this objection we have recourse to the observations.

Generally, the more this affection goes on the more the tendency to attacks becomes marked. I have often had to treat persons who for years regarded cephalalgy as incurable or, as the popular expression says: "An enemy with whom one is obliged to live."[1]

1. This resignation is badly rewarded : when one has an attack every fortnight or at longer intervals on picks up courage, as best one may, and endures it. But the crises influence the character and mental state, sometimes they make work impossible and constitute an infirmity; this is the moment when even the most courageous people try all medications, however uncertain and painful they may be.

The physician must try to avoid this danger. He ought never to promise that the radical cure will take place within a determined period. When one has had unexpected success, one has a tendency to optimism.

I consider the following varieties of an unfavorable prognosis:

1. *Very old cases.* One has, however, sometimes even in these conditions good results. The patient in observation III. complained of headaches since her eighth year; she had tried everything, electricity, iron, quinine, arsenic. Some time before the treatment she had had up to four attacks a month. After eight weeks of massage I obtained complete success. The observations VIII., XII., XIII. also relate to very old cases. We must not be disheartened at the beginning because the affection dates from a long time and declare that nothing is to be done. The only thing is to be circumspect.[1]

We may promise amelioration after a long time without even affirming that it will be produced. If we see that the attacks become less intense and especially more distanced as the myositis of the nape diminishes, the prognosis is favorable. The restrictions made at the beginning of the treatment have another advantage: If the patient submit to a treatment after we have told him that its success is uncertain, it shows that they are decided to go

1. Cephalalgy generally ceases in the woman once they have come to the critical age, or it is so insignificant that it is not worth speaking of. I have however seen exceptions to this rule and even cases in which the pain increased after this period. Observations III and XII are a proof thereof.

on with it, whatever may be its duration. We will not meet with impatience and discouragement at the moment when we may hope for something.

2. *General affections of the nervous system.* We have several times tried to use massage in persons suffering from neurasthenia, in cases where after examination we were able to state the presence of one or several of the inflammatory deposits in question. Sometimes the result was favorable, but unfortunately we soon had a relapse and some months or even weeks after the end of the cure, the patient suffered as much as before. Cases in which the cure persisted are quite exceptional. What has been said about neurasthenia may with greater reason be applied to hysteria. There is no need of repeating what we have said in other words: if at the examination we do not find anything in the forehead, the scalp, the muscles of the nape and in the outer edge of the trapezius, it is useless to perform massage; a failure would be the result of it. We speak of local massage and not of that one which belongs to a treatment of which the object is the improvement of the general nutrition as that of Weir Mitchell.

3. *Cephalalgia of chlorosis and anæmia.* Some of them are cured by our method, others are not. This state is not necessary isolated and independent of rheumatism. Nothing prevents the production of limited chronic myositis of the neck. In this case, besides the habitual cephalalgy which corresponds to the general state, there are sometimes attacks, paroxysms, which may be made to cease by treating the local deposits; but

here, as in neurasthenia, massage must be considered as an element of a medication with multiple factors; it may happen that persons affected with chlorosis have no longer any attacks of migraine and that their state is unsatisfactory. In my opinion it would be preferable in most cases only to treat these in the last place, when the other symptoms have disappeared and the general state of health is satisfactory, one has then more chances of succeeding.

4. *Continuous cephalalgias* characterized by pains, shooting or dull, during the night as well as the day. They are—especially if they are old ones—often of central origin and depend on an affection of the brain or the spinal cord, on a general neurosis, an organic disease with permanent compression of one of several nervous filaments, etc.; we cannot do anything for them. They may, and very often have, an extra-cranial origin and are consequently susceptible of massage.

These remarks show that it is with massage as with all therapeutic methods. When a patient, convinced beforehand by the accounts of enthusiastic persons who have been cured, comes to see us and asks us to begin the treatment, let us take care not to enter into these ideas, and before beginning the treatment let us make all inquiries which may be able to enlighten us on the causative affection; let us make a complete semiological study of cephalalgy. It is the only means of proceeding rationally and rarely encountering deceptions.

Patience on the invalid's part is indispensable; one only rarely obtains anything before the third or fourth

week; however, I have seen some cases in which quite rapid results were obtained. A young lady, married since a few years, had had a violent headache for three years, in which massage produced an unexpected effect; after the first sitting the pains ceased; they only reappeared once, a fortnight later. A painter suffering very much from anaemia, which I treated five years ago, had had painful caphalalgies for three years. The last weeks they had been continuous and left him neither during the night nor the day. After a few days of treatment the improvement was obvious and after three weeks he declared himself cured. As deposits of myositis still existed I insisted on continuing the treatment for a fortnight. After this period everything disappeared and he has had no relapse. Lately I have obtained the same rapid cure in two other cases: a lady, treated at the end of last year, suffered every day for two months; she was cured after three weeks. During that time she only had three very slight attacks. The second patient was a man who had suffered for eight years and who at the approach of spring had longer and more violent attacks. At that period, they last several weeks every year. At the beginning of the treatment he suffered every day during a fortnight; later on no cephalalgy nor any new attacks for five or six weeks; up to last September no relapse.

Besides these facts I might place others, more rare, in which not the slightest improvement was obtained before five or six weeks. In these cases the affection had generally lasted for a long time. On the other side, I have seen very old ones (of thirty or forty years' duration), in

which, contrary to all supposition, there was evident amelioration after a treatment of only a fortnight. (See Obs. XII.)

When the pain comes back suddenly during the treatment, which is very disheartening, it does not forbode anything as long as an indurated part and a zone of sensitiveness exists, the cure is not definite. In those sudden relapses we perceive that the lesions which at this moment tended to disappear have acquired a new importance. One would act wisely in warning the patient of this eventuality, at the beginning. What has to be done? Continue to apply the adopted procedures; it is an arrest of progress, not a proof of powerlessness. Then we ought not to believe that the persistency of a vague pain in the head is a proof of the treatment having been unavailing; the complete disappearance of the crisis always constitutes a favorable sign. I have seen this happen in some cases and amongst others in a lady suffering from chlorosis who complained of violent migraine since five years; these attacks had begun during a pregnancy; the confinement had not made them disappear. In the interval of the attacks, there was a more troublesome than painful cephalalgy. I found the classical alterations of the nape; after five weeks of massage they disappeared as well as the attacks; a kind of concomitant heaviness continued for some time, was attenuated and ended by ceasing without the patient having done anything against it. We read in almost all works on cephalalgy that pregnancy makes it disappear. This is a rule subject to

numerous exceptions; the fact which we have just related is a proof of it.[1]

I have said, and I repeat, that one would be wrong in only making the manipulations work on the muscles. Since the publication of my first work, I have massaged the nervous filaments of the scalp, when it was possible to find sensitiveness along them and with greater reason when they were the seat of structural alterations. I have massaged the ganglia of the sympathetic nerve, when one or several of them were swollen and painful on pressure. I have worked on the subcutaneous infiltrations as often as they could be discovered. I cannot trace rules applicable to all cases because of the variations which they present. Now, precautions and often more diplomacy are necessary in nervous women than in other invalids; their sensitiveness is greater; the slightest contact is often painful to them; one cannot rely upon any firm resolutions on their part, whatever may be their wish to get cured and their confidence in the method. As to the scalp, the hair is often an obstacle; one is sometimes obliged to trace with the scissors an imperceptible line corresponding to the course of the nerve that has to be massaged.[2]

Never make the patient expect an instantaneous relief after every sitting; I have seen several patients feel rather disappointed in this respect. I treated them at the

1. This state does not seem to me to constitute a contraindication to the use of massage of the nape.

2. One is only very rarely obliged to have recourse to this proceeding.

moment of the attack and this persisted. The only difference between their state before and after the massage was that in the second condition they felt a sensation of numbness of the whole head. After one or two hours only, they were distinctly relieved, but that does not always happen.

The sitting lasts fifteen or twenty minutes. Massage is performed with the thumb; in the beginning, before its muscles have sufficiently developed, one gets tired very quickly and is more than once obliged to interrupt the seance; by exercise, one gets used to it. The frictions ought always to be performed from the periphery towards the center, in the direction of the lymphatic current. Very often it is only by petrissage that we are able to overcome the deposits, which are found on the upper edge of the trapezius. The treatment, sometimes painful at the beginning, is well tolerated after about a fortnight, because of the diminution of the inflammatory state and the local bruised pain; the harder the deposits, the more energy is needed in the massage. With the nerves, it is well to perform simple friction at first and then pressure and trepidations. These at first produce an increase of the nervous irritability, which is, however, soon followed by a certain degree of fatigue, producing a diminution of the pain and sensitiveness to pressure. By the repetition of these manipulations, this state becomes permanent.

On a level with and in the neighborhood of the emergence of the supra-orbital nerve one massages laterally downwards, when alterations of perineuritis exist. We cannot say anything with regard to the sympathetic gan-

glia. It is the individual sensitiveness which rules everything; the upper and middle ones are easily found; as to the last one, which is more or less hidden behind the sternomastoid muscle, it is well to make the patient turn his head to the opposite side. The lowest one, astraddle on the first rib, is less accessible. Fortunately it is more seldom affected than the two others.

After the cure one may still expect relapses. This is fortunately not the rule, but the exception. In one hundred and forty-two cases, cured or ameliorated, I have noticed it only thirty-one times. Sometimes the relapse comes after some months; sometimes, but more rarely, only after several years.[1] The symptoms are generally less decided and less painful than in the first attack; the reason of this is that the deposits are less numerous than at the beginning and that they are only partially reproduced.[2] The duration of the treatment is shorter than

1. The tendency seems to me to be less marked in persons who are no longer young. It is also worth observing that we must not rely on the action of nature and let even a small rest of the muscular inflammation subsist which might constitute the germ of a later development.

2. At the meeting on February 13. last year, of the Medical Club of Vienna, Dr. Bumm made a communication saying that one often meets hemicrania, the cause of which is nothing but an inflammation of the muscles of the nape and the cranium of rheumatic origin. He says that massage is successful for these indurations and consequently in attacks of hemicrania. In 17 cases thus treated 8 were cured after a period of one or three months. All this is to be regarded as a satisfactory result, considering that the author of the communication who only since a short time occupies himself with this kind of massage cannot, so it seems to me, be quite au courant with the manipulations nor the cases which are fit for this treatment, things which one only learns through rather a long experience.

the first time (a fortnight or three weeks). In some patients only I was obliged to begin again twice; at the end I overcame all.

Before I finish this chapter I will say a word about Cephalalgy produced by *congestion*. "Congestive cephalalgias," says Martino, "are those which come on through an afflux of blood towards the head, as is observed in certain cases of general or local plethora, when there are obstacles to the circulation in the upper parts of the trunk, or when inflammation or other intra-cranial alterations exist."

It would never have occurred to me to apply massage against cerebral congestion if we had not by chance been brought to it.

In the spring of 1892, Prince S—r, from Vienna, sent to me by Prof. Billroth, came to be treated for a migraine from which he had suffered since several years. The examination of the invalid showed that at the same time he was affected with symptoms of cerebral congestion which he asked me to treat. I answered him that massotherapeutics could not have any effect on this last affection and I treated only the migraine. He was not long before being cured and when he came back to see me the following year, he told me, not without astonishing me, that the congestive attacks had also disappeared, although he had ceased to use the medication which had formerly been prescribed for him.

I at first thought it simply a coincidence and I wished to repeat the experience before declaring myself.

The first patient that presented herself to my observa-

tion was a lady aged sixty-two years, who had reached the age of the menapouse since seven years. She complained of heaviness of the head, tingling in the ears, weakness of the legs, etc. There were at the same time signs of myositis in the nape. Massage soon made all these symptoms disappear and the patient, seen again fourteen months later, had not had any relapse of her disease. Another person of about the same age and presenting the same symptoms, was treated and cured in the same manner. The symptoms had not reappeared for twelve months after the end of the treatment.

A Protestant pastor, aged fifty-four, with his face red, the neck big and apoplectic, with a tendency to sleep after meals, giddiness, etc., came to see me to rid him of all these congestive troubles.

I began massage of the muscular inflammations of the neck and obtained, after a relatively short time, such an amelioration that he felt as if he had grown twenty years younger and would devote himself to his study and work, which his disease had prevented him from doing for several years.

Seven other invalids have been treated since with the same success.

It is interesting to note that in all these cases the myositis has been diagnosed as if there existed a relation of cause and effect between the intra-cranial and the extra-cranial congestion. The presence of other rheumatic manifestations and the constant presence of congestive signs made the idea of a simple coincidence illogical.

This clearly proves the existence of congestive ceph-

alalgias produced by muscular inflammations of the neck and apt to be cured by massage.

The observations of headache I have already alluded to follow here.

Observation I.

Continuous Cephalalgy of One Year's Standing.—Tenderness Corresponding to the Cranial Insertion of the Trapezius.—Local Puffiness of the Scalp.—Massage.—Cure.

Mr. D., 50 years old, whom I have had the opportunity to treat several times for rheumatoid affections in different parts of the body, for the first time suffered from cephalalgy during his stay at Biarritz in the Autumn of 1885. The pain, which is situated on the right side of the head only, radiates to the supra-orbital region on the same side. It is not acute, but quite supportable. It is almost constant, and begins in the morning, shortly after the patient has got up, but does not continue during the night. This patient's daughter having been cured by massage of a migraine of several years' standing, which depended on the presence of muscular indurations in the region of the nape of the neck, he himself tried to find out if the cephalic pains did not have the same origin, and discovered behind the right ear a spot more sensible to pressure than the rest of the nape. Frictions performed at this place seemed to relieve him. Since his coming back to Paris he feels every day the same pain as in Biarritz. I saw him the following year in November. I easily found an induration of the size of a small nut in the right splenius in the neighborhood of the cranial emergence of the lesser occipital nerve; swelling of the scalp in the occipital region of the size of a 25-cent piece. No sensibility to pressure along the supra-orbital and lesser occipital nerves.

On the left, near its cranial insertion, the trapezius is the seat of a beginning inflammation. Pressure is not very painful. After one sitting, I succeed in making the pain disappear for several days. After a week it reappears, but is much less violent than before and lasts three days. Complete cure after four weeks of massage. Nothing in the head during a fortnight. The deposits of muscular induration and infiltration of the scalp have disappeared.

During the six months which have followed the treatment there has been no relapse.

Observation II.

Cephalalgy for Fifteen Years.—Two Kinds of Attacks, the One Very Acute and the Other More Tolerable.—Muscular Indurations at Different Parts.—Tumefaction and Pain in the Cervical Ganglia of the Sympathetic Nerve.—Massage.—Cure.

Mr. T., of Argentina, 50 years old, came to see me October 2, 1887. For 15 years he had suffered from violent headaches, for which numerous injections of morphine had been given, and of which the marks may still be seen on the right arm. This patient had seen several celebrated physicians in Europe and America; numerous opinions were given on the nature of his affection. Cerebral congestion or anaemia, rheumatism of the scalp, general neurosis with cephalic localization, reflex neuralgia, having the stomach as a starting point, were diagnosed. None of the treatments tried produced anything but a temporary relief of short duration. Electricity, hydrotherapy, change of air, watering places, Schrott's regime, quinine, aconitine, gelsemium, caffeine, bromide of potassium, nitrite of amyl, antipyrine, have all been tried without result or only with an insignificant one. Injections of morphine alone succeeded, but the dose had to be increased to such an extent that at the end

they provoked accidents of intoxication. The patient is all the more hopeless, as he considered his neurosis as hereditary; his mother, father and sister had all had neuralgia of the same locality, and of similar intensity.

Even at the beginning the attacks were painful, but since some years they had become almost intolerable and extended to the whole head. They are of different character; some of them, developed with the rapidity of lightning, are generalized after a few minutes. They begin on the right side, but very quickly pass to the left. They are of neuralgic character, acute, shooting, coming on without premonitory symptoms at any moment, sometimes in the street, but generally they begin in the morning. In that case they increase in intensity until the evening and pass to the side opposite to that where they had begun. These attacks go on, becoming weaker, until the evening of the following day. They are very frequent, almost weekly during the cold season. Being less violent than those about which we are going to speak, they do not prevent the patient from sleeping. In these the whole head is affected, but the sensation is especially violent in the temples, less so in the forehead, but more marked in the right half of it. Its progress is quite different from that of the first one; this begins suddenly, the second one, on the contrary, is preceded by a sensation of heaviness, which little by little spreads either towards the nape of the neck or towards the temple, and invades the whole of the head during several hours; the increase of the intensity follows the same gradation. During these attacks the face becomes red and the pulse is accelerated; preparations of quinine do not produce any effect.

For about four or five years these last attacks succeed to each other regularly with intervals of three weeks. The patient suffers martyrdom during 24 hours, he can neither eat nor sleep; this is the moment he wants injections of morphine. The crisis is followed by prostration and gastric disorders, which probably depend on the absorption of the morphine.

The whole head is affected, but the maximum of the pain corresponds to the orbito-frontal region; when the paroxysm is over, there remains a diffuse tenderness of the head, which is more marked along the nerves.

Finally, the third variety of pain, isolated and different from the preceding ones, only exists in the right temporal region. It is very quickly produced under the influence of draught, which directly strikes the region. It remains localized, but only lasts eight or ten hours. This pain is manifestly a rheumatic one.

These are the local alterations which I was able to find in my diverse examinations: On the right, behind the mastoid apophysis, marked and voluminous muscular induration. In the trapezius, towards the middle of the nape of the neck, another less resistant and probably more recent one. When energetic pressure was performed at this place, the patient felt violent paint at the top of the head and above the orbita. A lymphatic ganglion of the neck was tumefied and painful on pressure.

The upper cervical ganglion of the sympathetic nerve is also tumefied and very painful on pressure. When this one is energetic the patient complains either of pain at the top of the head or else of a sensation of very painful epigastric constriction or of vesical pains. The middle cervical ganglion presents similar alterations. There are hardly any on the lower cervical ganglion. Very marked hyperaesthesia along the supra-orbital and nasociliary nerves.

On the left there is the same induration, almost symmetrical with the insertion of the sterno-mastoid.

Small resisting nodule in the body of one of the scaleni; very evident resistance in the trapezius on a level with its insertion on the scapula.

The upper cervical ganglion on this side presents the same tumefaction and the same pain on pressure as its congener. These phenomena are much less marked on a level with the middle cervical ganglion. Along the supra-orbital nerve, cor-

responding to the place where it comes out of the orbit, on the right side, I feel a hard, thick and resistant cord. The some phenomenon is observed on the left, but in a less marked degree.

On both sides and especially on the right, in front, the upper attachments of the temporal muscles are extremely painful on pressure. This pain differs from the one which is felt in the other regions; it is extremely violent; the patient says that he feels as if a knife was driven into his head.

At his solicitation, I began massage, but I dared not promise anything, because of the intensity of the affection, the extent of the lesions and the long duration of the disease. The first sittings were very painful, but the patient soon became used to them; after three weeks the treatment was well tolerated. All the affected parts were successively massaged. During the first six weeks I did not obtain the slightest amelioration.

Fortunately, the patient, persuaded that massage would be useful to him and discouraged by the multitude of treatments which he until then had followed in vain, persisted, with rare energy. By and by there were periods of amelioration, followed by attacks similar to the former ones. Then, these periods of rest became longer, but unfortunately the attacks were always as painful as before. After two and one-half months of treatment the improvement was evident. There were no more violent attacks occurring with almost regular periodicity, the other ones were also rarer and less intense. The pains remained unilateral and disappeared in the course of the day. During the whole duration of the treatment it was possible to foresee the coming on of the attacks by the degree of sensitiveness of the ganglia of the sympathetic nerve and the indurations of the sterno-mastoid muscle. When this sensitiveness was increased, a crisis almost surely followed the day after. Three months of treatment was necessary before the patient could be considered cured. At this moment he declared, too, that

he felt since three weeks only a fugitive and slight pain in the right temple, and this because of having been in a draught.

Nothing more is found in the ganglia of the sympathetic nerve. The alterations of the sterno-cleido-mastoid muscle were more obstinate than the rest. They, however, disappeared through very energetic massage. The inflammation of the temporal regions was more easily cured. There were, as we have seen, serious relapses even during the treatment. I was persuaded that all would be well during the summer, but fearing new attacks at the coming on of the cold season, I advised him to come to see me in the autumn, if anything would make him fear new attacks. I have not seen him again, and I have heard that when he started for America, the following December, he was all right (I have had news from this patient through one of his commercial correspondents in Paris, in March, 1890. He said that he very rarely felt headaches, and those which he had were not bad and did not prevent him from attending to his business).

Observation III.

Cephalalgy Dating From Childhood.—For Some Years, Monthly and Then Weekly Paroxysms Similar to Attacks of Migraine.—Indurations of the Nape Corresponding to Several Muscular Insertions.—Sensibility to Pressure Along the Supra-Orbital Nerve.—Massage.—Cure.

Mrs. C., 55 years old, thin, pale, but having never had any other indisposition except disseminated erratic pains in the whole body, came to see me at Ragatz during the Summer of 1886, for headaches, from which she had suffered since her eighth year. From her tenth year the pains were dull, heavy, localized in the frontal region; they were only produced after diligent and rather long and intellectual work. Methodically applied, electricity only produced a pass-

ing relief. These attacks were attributed to anaemia. She took iron, quinine, arsenic, but without effect. Since that epoch the cephalalgy ceased to be customary, but it took the acute paroxysmal character of migrainous attacks. There was generally one crisis a week; sometimes more, which lasted two days. During the winter 1879-1880, when she was staying in the South of France, the affection seems rather to have gotten worse. She had hoped that the menopause would produce a diminution or complete cessation of the pain, but this hope was unfulfilled. Since the menopause she suffers more than ever. On the contrary, 14 years ago, during a pregnancy, she had felt considerable amelioration.

During the month which preceded the epoch at which I saw her for the first time she had had four attacks. The periods of delay are only of insignificant duration. The crisis begins in the morning when she gets up, attains its acme at about 12 o'clock; is of the same intensity for two hours; then all becomes calm. She does not suffer during the night. On awakening the following day the attacks are reproduced in the same order as the day before, but she does not suffer quite so much. The pains are equal on both sides of the head; they always begin on the right; she does not feel anything in the nape of the neck. Everything begins towards the vertex; then the pain is propagated towards the forehead, the orbits and the temples. It is at this moment that the crisis is at its acme. The eyes are red and weeping; there is photophobia; the eyelids are heavy. The slightest noise is insupportable; she cannot bear to hear a conversation or footsteps in a room next to the one where she is without the pain being considerably increased. There is no vomiting, but nausea during the attacks. She is relieved when she goes to bed and falls asleep. There is such a sensibility of the scalp that she can hardly bear the pressure of the pillow. A great part of her hair came off; the pains are in no way modified by the change of climate or season; she suffers as much in Sum-

mer as in Winter. Long sitting up, depressing emotions, digestive disorders are almost sure to provoke an attack. These are especially painful in travelling by rail. Since several years she has been obliged to live in retirement and to avoid all social relations. She has taken bromide of potassium several times, but it only produced temporary amelioration. She has had recourse to antipyrine. At the beginning she was rather relieved, but for several months even big doses do not produce any effect. When I examined her for the first time I found a very marked induration in the neighborhood of the cranial attachments of the splenius on the right side. On tne same side, very strong resistance of the sterno-mastoid muscle, a little behind the attachment to the mastoid apophysis; it is very sensitive to pressure; the pain which is provoked by it radiates toward the vertex. There also exists a deposit of induration on the left side, along the attachment of the trapezius to the skull. Very extended tumefaction of the aponevrotic sheath in the region of the occipital protuberances; some sensitiveness along the supra-orbital nerve in the right frontal region. Treatment by massage over the indurations. The patient easily tolerates it and does not interrupt it, except during the time required for her return to Paris. After a fortnight there is already a marked improvement; this increases and after a treatment of two months and a half the patient declares that she is cured. She had not had any attack nor cephalalgy for a fortnight, which had never happened to her before. The indurations had quite disappeared.

I saw her ten months after the end of the treatment; she was healthy-looking, did not suffer and nothing reminded one of her former unhealthy appearance. For six or seven months she had been quite well, but since three months she has from time to time some headache. These attacks are rare and cannot be compared, neither as to duration nor intensity, to what they were before. In examining her I find that some indura-

tion has been reproduced at the insertion of the sterno-cleido-mastoid muscle. It disappeared after three weeks of treatment. I have quite recently had news of her through a friend living in Paris (October, 1889). The cure had been maintained. She is able to go out into society and only very rarely has some very slight cephalalgy.

Observation IV.

Cephalalgy from Childhood.—Attacks Produced Through Various Influences.—Muscular Indurations in the Nape of the Neck; Myositis of the Upper Insertion of the Temporal.—Massage.—Cure.

Mrs. M., 27 years old, Swede, came to me in March, 1888. Her headaches date from such a distant epoch that she cannot tell precisely their beginning. She suffered during childhood, and more frequently from 14 to 16 years of age. This lady, who is a painter, attributes her headaches to her sedentary occupations; she is also very anaemic.

At the beginning the pain had its seat exclusively in the frontal region, but by and by it was extended to both sides of the nape of the neck. It is generally dull, but from time to time it becomes acute and shooting. Since some years she lives in Paris. The pain was rather aggravated through the change of place. At present the pain is situated in the nape, on one side or the other. It is propagated forward toward the forehead and the eyes, which become red.

Changes of weather, and especially fogs, exert a bad influence. She is better during the summer at the seaside. Frequently going to museums, which she is obliged to do, never fails to provoke a crisis. For the same reason it is impossible for her to go to theaters. When she has bent her head to one side and wants to straighten it again she feels a sort of crack in the nape. From time to time a swelling is produced

behind the ear. Heat and a sort of heaviness will soon be spread over the back of the head.

She cannot change her habits—for instance, go out in the morning without an attack of cephalalgy beng produced. This begins by heaviness of the head and then gradually increases, so that in the afternoon she is in the middle of the crisis. These attacks continue during a great part of the night; at last, she is quite exhausted from fatigue and sleeplessness. For some months she has had two attacks a week. The pain, always less acute at the beginning, presents a pulsatile character; later on it is shooting. During the whole attack she has difficulty in lifting her arms, specially the right one. From time to time she has vomiting, preceded by a pain, violent enough to make her cry out. She used cold compresses, coffee, continuous currents for five weeks. After this treatment she felt better for two months, but the pain was not long in reappearing with the former intensity.

Behind the mastoid apophysis, on the right, there was a point sensitive to pressure. Another one existed in the trapezius (small elipsoid surface about the middle of the region of the nape of the neck). On the left, marked swelling on a level with the cranial attachments of the splenius or the trapezius. On the temporal region, violent pain, corresponding to the cranial insertion of the temporal muscle. The same kind of pain exists on the right side, but is less violent. Nothing along the supra-orbital nerve nor along the other muscles of the cranium Massage not well tolerated at the beginning. After three weeks the treatment is easily borne. In the course of it there were ameliorations, followed by relapses and exacerbations. After eight weeks the patient ceased to come regularly. However, the improvement continues so that she considers herself to be cured. I saw her in June, 1891. She was quite well.

Observation V.

Cephalalgy of Twelve Years' Duration.—Alternately Frontal and Occipital Pains.—Indurations on a Level with Several Muscular Insertions to Cranium.—Tumefaction of the Sub-occipital Ganglia.—Tumefaction and Pain Corresponding to the Cervical Ganglia of the Sympathetic Nerve.—Massage.—Cure.

Mrs. R., 28 years old, suffers since twelve years from violent cephalalgia. Combined with vague pain in the loins and right arm, the headache has not changed its place since the beginning. It always has its seat in the right temple and radiates to the orbit on the same side. This pain is so violent that it does not give the patient any rest even during the night. It seems to him that his eye is being torn out; it becomes red and gets watery. No pain in the frontal region. Sometimes, when the attack is more violent, the patient feels acute pain in the neck. This pain is very limited and corresponds to the cranial point of emergence of the lesser occipital nerve. It is lancinating and is produced some time after the first one. The crisis lasts only a short time—one hour or two. There are two, even three, a day; a little less in the night. In the interval of the attacks the head is heavy. The pain is almost always on the right side; it rarely passes to the left, and in this case it is always very insignificant.

No dyspeptic phenomena. Wind, rain and cold multiply and aggregate the crisis. During summer the patient does not suffer, but as soon as the fogs in the autumn begin she feels pains. Sometimes they last continually for several days. Since she has lived in Paris (only a short time) the pain has increased in frequency and intensity. It is attended with a very painful sensation of depression and disgust with life.

Aconitine, quinine, antipyrine, iron, galvanization of the sympathetic nerve were tried. This last medication was the only one that gave a satisfactory, but passing, result.

Actually (September, 1890,) we find in t..e splenius on the right side, near its cranial insertion, a muscular induration of the size of an almond, of which the limits are very distinct. Two ganglia in the neighborhood are swollen, as well as the mastoid region on the same side,which is very sensitive to pressure, corresponding to the sterno-mastoid attachment on this side. On this level the skin and the subcutaneous cellular tissue seem rather thickened. No sensitiveness over the supra-orbital nerve. Swelling and very marked sensitiveness on a level with the upper attachments of the temporal muscle, especially in the front. The middle cervical ganglion of the sympathetic nerve is swollen and painful on pressure. On the left tenderness on pressure, on a level with the upper cervical ganglion, a little less on a level with the middle one.

Massage is painful. Pressure on the above-mentioned muscular induration of the nape provokes a sensation at the bottom of the orbit, similar to the one produced during the crisis.

After a week of treatment the pains cease and only come back after a fortnight or three weeks. They are not violent, and only last a day. It is a heaviness of the head rather than cephalagy. Massage not painful during the last period of the treatment. After six weeks complete cure.

The deposits of muscular induration have disappeared. No sensitiveness to pressure on the ganglia of the sympathetic nerve. I had news of the patient at Ragatz in the summer 1893. The same condition was maintained.

Observation VI.

Cephalalgy of Ten Years' Duration.—Indurations at the Insertion of Different Muscles of the Neck.—Massage.—Cure.

Mrs. D., 26, always had headaches since she first menstruated. When she was about 20 the pains were relatively slight. Since then they have increased in intensity. Married

at 22, she has had two children. During her last pregnancy the headaches were violent and obstinate to such an extent that injections of morphine did not soothe them. The attacks, which were irregular, generally took place twice a week; began in the morning, generally at about 2 o'clock, and only ceased the following day in the evening. The patient feels relieved when she has eaten, but after an hour the pain becomes more acute than it was before. Changes of weather, and especially the approach of snow, seem infallibly to provoke attacks. She suffers as much during the hot weather as in winter. At the moment of the attack the head, face and scalp are burning; the patient feels relieved when she presses them with both hands. There are tingling in the ears and stiffness of the nape. When the patient can get up, walk and work the movement and activity considerably relieve her.

The pain is frontal and radiates to the bottom of the orbital cavity, behind the eye. On this level it is violent and shooting; the globe itself is spared. In the nape bilateral shooting pain, stronger on the left. Sometimes this localization alternates with that of the forehead; when the patient ceases to suffer in front, the sub-occipital and sub-mastoid regions are affected. It is at this moment that she complains of tingling in the ears. A great part of her hair has come off. She succeeds in soothing the very slight crisis with sulfate of quinine. In the others she has to have recourse to antipyrine and injections of morphine. Since two months these have not the slightest influence. She tried several cures at mineral stations, among others, Aix-les-Bains, without any result. In examining her I find several alterations in the cellular tissue; they have their seat in the nape and the shoulders. Indurations corresponding to the mastoid insertion of the sterno-cleido-mastoid muscle, on the left; to the splenius and the upper edge of the trapezius (on both sides). Nothing abnormal in the supra-orbital and nasociliary nerves. Three attacks after the beginning of the treatment; two or three times she was threatened in the morn-

ing, but all disappeared during the day. The tingling does not exist any longer; the attacks have not appeared for a long time; the patient can be regarded as definitely cured. The duration of the treatment was six weeks, during which she had forty-two sittings. I had news of this lady December, 1889; the cure had been maintained.

Observation VII.

Cephalalgy for Sixteen Years.—Multiple Muscular Indurations.—Tumefaction of the Middle Cervical Ganglion with Pain on Pressure.—Massage.—Cure.

Mrs. C., 40, came to see me in the course of 1888 for a cephalalgy from which she has suffered for sixteen years. When she was 24, during her first pregnancy, she began to feel the pains of which she now complains, but in a slighter degree. She put it all to account of her state and fatigue, but the attacks did not cease with the pregnancy. On the contrary, they became more frequent and took more or less the form of classic crises of migraine. They generally began in the morning, shortly after she had risen; the pain started in the nape of the neck on both sides. After an hour or two it got over the whole head, increased in intensity and reached its maximum at about 4 o'clock. The pains, dull at the beginning, soon became acute and shooting and radiated in all directions. The head was hot, sensitive to touch; the pressure of the pillow was difficult to tolerate. It seemed to her as if her hair stood on end. The face was red and swollen; she felt violent pulsations in the temporal regions; no nausea. The patient feels much better when she is up and works. She is relieved for some time by frictions on the head. Towards the evening she falls asleep; overcome with fatigue. On awakening after the first sleep she always feels pain. The follow-

ing day the crisis is over and she only feels general weakness. Most often the attacks are produced by atmospheric changes, damp or cold weather, a wind gust on the nape, specially when the transition is sudden, and particularly when the patient is perspiring. She says that in these conditions she often got torticollis.

Attacks also easily come on when she has been reading for a long time, sewing on a white background or looking at pictures in museums. By and by the eyes get tired, the pain is extended to the frontal region, and radiates to the whole head.

Since four or five years the pains seem to have quite changed. The real attacks no longer exist. The patient awakes with headache; it at once attains its maximum of violence; much less violent, however, than formerly, although it lasts longer. When I saw her for the first time in the year 1887 she had suffered without interruption for two months; sometimes in the night, as well as in the day. The pain was insignificant in the course of the later pregnancies; it became violent, however, and almost unbearable during the suckling. The patient, who had followed several treatments and frequented several mineral stations, only felt amelioration after a stay at La Bourboule. Galvanism, tried for a long time, increased her pain to such an extent that the treatment became intolerable. Morphine, quinine, antipyrine, antifebrine were not more easily tolerated, and did not give any better results. On the right side, a muscular induration of the size of a nut is found in the upper edge of the trapezius; when I pressed on this level the patient complains of an acute pain in the top of the head. Resistance, very painful on pressure, in the scaleni. Middle cervical ganglion swollen and painful. On the left, in the thickness of the trapezius, small lump, of the breadth of a dime, corresponding to the cervical portion; another induration on a level with the insertion of the sterno-cleido-mastoid muscle. The skin and the sub-cutaneous

cellular tissue are the seat of a chronic infiltration. The scalp in the occipital region is infiltrated and clammy. The upper and middle cervical ganglia (specially the middle one) are swollen and painful. Nothing in the nerves of the scalp. As I have already said, the patient had continually suffered for two months at the beginning of the treatment; she had no attacks during the two or three weeks following. During the whole course of the treatment (about two months) three slight and short attacks. At the end of it nothing remains of the muscular alterations, but the infiltration of the scalp in great part persists. The occupation of the patient does not allow her to stay any longer in Paris. As we were almost in summer, I made the remark that she will most probably be well during this season, adding that a return of her attacks is to be expected at the end of autumn. I saw her in the beginning of November; she told me that she had been quite well until October. Since the end of the treatment she had only had three very slight attacks, which had not lasted more than between 8 and 12 hours; they had been provoked by a sudden chilling of the neck. Some muscular indurations were partly reproduced. Three weeks of treatment were sufficient to make everything disappear. I had news of this patient March 15, 1890. The curing had been maintained.

Observation VIII.

Cephalalgy for 22 Years.—Indurations Corresponding to the Cranial Insertions of the Muscles of the Neck and the Fleshy Part of Different Muscles.—Swelling and Sensitiveness to Presence of the Upper and Middle Cervical Ganglia of the Right Side.—Massage.—Cure.

M. M., 34, Englishman, came to see me in March, 1889, for a cephalalgy which he had had since he was 12 years old. At that period he often had attacks of neuralgia, which lasted

two or three days. He cannot tell whether intellectual work has anything to do with them. It was believed that it was idleness and feigning, because he often complained of not being able to work, because of the headache.

Since then the pains have changed, neither in character nor seat. The attack always began by a painful sensation in the frontal region, which little by little extended to the whole head. He suffers equally in Summer and Winter; the crisis comes rather regularly, generally every fortnight; sometimes only once a month; but it never lasts more than one day. It begins habitually in the morning, when he is in bed, in the above-mentioned region. After half an hour the whole head is affected. The pain increases up to about 12 o'clock, and it ceases almost suddenly, without leaving the slightest disagreeable sensation. During the crisis, it seems to the patient that his head is pressed as in a vise. All changes of diet and especially indigestions, are followed by very violent attacks in such a way that it was believed to be gastric vertigo. During the attacks quiet and rest considerably diminish the pain.

There are never any pains in the eyes, but some obnubilation of the sight. Having suffered much, he has become nervous, irascible; the slightest thing puts him out of temper.

This patient, who is a talented writer, well known in England, cannot do any assiduous work. Lately he has taken sulphate of quinine in large doses, without any results; aconitine only produced a passing amelioration; blister behind the ears without results; the actual cautery has not succeeded any better; he has made use of several mineral waters without any advantages.

On the right the whole region corresponding to the cranial attachments of the muscles of the neck is painful; indurations to the length of one centimetre or even more in some places. On the level of mastoid apophysis there is a very hard swelling and tenderness on pressure. Both upper ganglia of the sympathetic nerve, especially the middle one, are swollen and

painful when touched. In pressing on it one provokes frontal pains similar to those which exist at the moment of the crisis. The supra-orbital nerve is almost insensible to pressure on both sides.

On the left tumefaction and induration on a level with the scaleni. Some of the neighboring lymphatic ganglia are increased in volume. Middle cervical ganglion swollen and painful on pressure.

Massage. After a month, an attack as violent as ever occurs; in less than half an hour all is over. A fortnight later the same phenomena are reproduced, the crisis begins, but does not go on. After two months complete cure; the above-mentioned alterations no longer exist. I had news of this patient at the end of September. During the six weeks which followed the treatment he had two slight and incomplete attacks. Since that period there have been only threatenings within very long intervals; the nervousness has diminished and the patient can without difficulty work in a continuous way. There no longer exists any tumefaction of the lymphatic ganglia. I had news from him in November, 1892; quite satisfied with the result obtained, he has felt only rarely some reminiscences of his old trouble.

Observation IX.

Cephalalgy for Three Years.—Various Indurations.—Massage.—Cure.

Miss G, 28, came to see me at Ragatz during the summer of 1888. Of rather weak constitution, she presents different deposits of articular rheumatism.

For three years she had suffered from cephalalgy. The attacks, which were rather rare and relatively slight ones, did

not prevent her from attending to her occupations. Eight months ago this cephalalgy became more serious. The attacks, still very rare, principally occupied the region of the nape. Since four months no day went on without her suffering more or less from the headache. The pain, without being very violent, was by and by disseminated over the whole scalp. Most often it is deep and not violent, but from time to time, under the influence of a cold gust of wind on the nape of the neck, the patient feels twitches—a sort of lightning running through the head in all directions. The pains most often begin in the nape, especially on the left side, and gradually radiate forward as far as the orbital edge. At this moment she feels such an itching of the conjunctival mucous membrane that it is almost impossible for her to raise the eyelids. There is some visual obnubitation; it seems to her as if red plates (plaques) fluttered before her eyes. These phenomena are only produced during violent attacks. Sometimes the pain persists the whole night and prevents the patient from sleeping, but most often she gets rid of it in the evening. The principal seat is very variable. One day it is in the nape of the neck; the following in the temples; the day after it is in the top of the head. The painful sensations are not always the same; sometimes it seems to her as if her head was burnt; other times as if some small animal were creeping under the skin. The pain begins either in the morning or at any time of the day. Some days it begins a short time after the patient has gone to bed. Generally the crises appear and are more violent at the menstrual periods. She suffers more when the weather is damp and cold, especially when she goes out. The attack is almost always attended with nausea; she feels relieved when she can eat. During the attack she becomes very pale and has a want of moving about; the digestion is not satisfactory. When it is painful in the evening a crisis is almost infallibly produced. Energetical pressure of the head between the hands and frictions performed in the neck relieve her. The pains

tire her much; she is weak and suffers from anaemia. For two months she used electricity, which only produced a passing relief. Lately she has for several weeks been treated with antipyrine; no result was obtained from it, and after some time she was unable to bear the treatment.

Almost all the muscles of the neck are affected with a moderately advanced myositis in a great part of their extent. There is diminution of elasticity, resistance without properly called induration. The external edge of the cervical portion of the trapezius and scaleni is more affected that the rest, especially on the left side. The temporal muscles are also attacked. Palpation is painful; the patient feels as if a knife were driven into the thickness of the neck. Puffiness on the left side corresponding to the muscles of the nape and extending over a rather large surface.

Massage, alternatives of improvement and stationary state. After three weeks the improvement becomes more marked. The intervals of quiet are longer, the pains are less acute and the patient is cured after six weeks; she has not then any headaches for twelve days. The muscular inflammations and the sensitiveness to pressure of the ganglia have disappeared. I saw this patient again October, 1892; she had had two attacks during the six weeks which had followed the treatment; after those she has not had any others.

Observation X.

Habitual Frontal Cephalalgy with Paroxysms Resembling Attacks of Migraine.—Muscular Indurations.—Pain Along the Supra-orbital Nerve.—Massage.—Cure.

Miss S., Swede, 23, suffers for three years from violent cephalalgy, which began in the left frontal region and then soon invaded the whole head. A violent exacerbation came on in

the course of a difficult voyage from Sweden to France. This new attack lasted a fortnight; the cephalalgy remained frontal, at first unilateral, then bilateral.

After the disappearance of the attack the pre-existing dull cephalalgy continues. This patient is at the seaside during the summer of 1884; she has photophobia every day; her eyelids are so heavy that it is almost impossible for her to open her eyes. The pain is constrictive; the patient feels as if she had a very tight ring round her head; she always suffers more on the left side. Since some months the maximum has passed from the forehead to the vertex. Physical or moral fatigue, emotion, a coughing fit, sneezing, are sufficient to product a crisis. The pain is more acute before the menses, it is diminished when the menstrual flow has begun. Changes of weather are without any influence. After a rather long journey she is so ill that she has to stay in bed for some days. The gastric disorders from which she suffers from time to time do not provoke a crisis. Generally of a pale complexion, she gets red when she suffers. She feels relieved when she can go to bed and sleep. Continuous currents for months without any results; sulphate of quinine administered by the stomach, did not succeed any better. I find a painful tumefaction behind the mastoid apophysis on both sides; another one exists on a level with the cranial attachment of the left trapezius. Pressure on this point is felt as far as the frontal region above the eye on the same side. The supra-orbital nerve in its upper course and for the length of 6 centimeters, is the seat of a pain very acute on pressure, which is more marked as we get nearer to the eye. There is induration along the nerve, to which a visible cord corresponds. No sensitiveness to pressure of the ganglia of the sympathetic nerve.

Massage in the spring of 1885. During four weeks nothing is obtained. The most obstinate alteration is that one which corresponds to the supra-orbital nerve, but, in spite of all, it disappears. After seven weeks of treatment the patient expe-

riences a complete remission for a fortnight; she considers herself cured.

I saw her again in Paris the following autumn; she was still quite well; had been at the seaside in the summer without feeling the slightest pain. I saw her again several times in the course of the winter; the cure was maintained.

Observation XI.

Myositis of the Scaleni.—Cervical Ganglia of the Sympathetic Nerve Painful.—Several Lymphatic Ganglia Swollen.—Cephalalgy with Paroxysms for Ten Years.—Massage.—Cure.

Miss T., 24 years old, Italian, came to a consultation for the first time in December, 1889. She was pale, had anaemia and seemed to suffer a great deal. The pains always began in the right lateral half of the neck, and soon went up behind the ear to the vertex. They are not violent at the beginning, but before long they become extremely painful; then the head is bent towards the affected side. This position is kept as long as the crisis lasts—i. e., between 24 and 48 hours. When the attack is over, the patient feels very much dejected from the pain and want of sleep. The pain is acute, shooting; the patient feels as if she were pricked with needles in the side of the neck. Lately, she had two crises a week. From year to year the pains were increased in intensity. Emotions, changes of weather, exert a considerable influence on the attacks; a cold draught is enough to provoke one. She never rides in an open carriage, except in hot weather. On examination of the neck, I find in its right half several swollen lymphatic ganglia, painful on pressure. The scalenus medius on the same side is the seat of a chronic myositis; in most of its extent violent pain on pressure. Massage begun at once produced a complete cure after two months, as the

following letter, which the patient wrote to me from home May 23, 1890, shows:

"Ten years ago—I was then 14 years old—I began to feel from time to time some pains on the right side of the neck, which were qualified by the physicians as neuralgia. At that epoch the attacks were repeated about two or three times a year, but they became more frequent and more and more painful from one year to another, and left the diseased part hardened after each crisis. In Rome, my physician attributed these neuralgias to the climate and for a long time advised quinine and other febrifuges. As these gave no results, I had for several weeks local injections of phenic acid, but all these modes of treatment had no effect. In Paris I consulted other doctors who stated the presence of the glands of the neck, declared that I was scrophulous and attributed the pains to the lymphatic state of the blood. With regard to this, I was sent to Creuznach (Germany) for two seasons, but the treatment only momentarily relieved me. Last year, my affection having grown much worse, I had occasion to consult Dr. Landovsky, of Paris, who earnestly advised me to try a cure with Dr. Norström. I followed his treatment for six weeks. At the first sittings I suffered more, and could hardly tolerate the pressure of the finger on the diseased part; but after a fortnight I began to feel real progress, and long before the end of the cure I did not feel the slightest painful sensation. It is now four months since the treatment was ended, and I do not feel any trace of the pains which had made me suffer so much during ten whole years."

To this I may add that at the moment when she stopped the treatment, there was no trace left of the muscular inflammation. The tumefaction of the ganglia produced by the myositis in the neighborhood was almost gone, too.

By her father, who came to see me in the Spring of 1893, I was told that her condition was the same.

Observation XII.

Very Voluminous and Hard Deposits of Myositis Behind the Right Ear; on the Left Smaller and Softer.—Tumefaction and Sensitiveness Along the Attachment of All the Muscles to the Cranium.—Both Upper Ganglia of the Sympathetic Nerve on the Right Swollen and Tender on Pressure.—Case of Very Long Standing and Great Intensity of Pain.

Mrs. R., 55 years of age, married to an ex-president of the Tribunal de commerce, and belonging to a family of note in Paris, suffers from headaches since her fifteenth year. Besides this disease, she complains of not quite well defined pains, which she feels from time to time in the whole body, and which she attributes to rheumatism. Up to the age of 50, corresponding to the epoch when she reached the menopause, the pains had been relatively tolerable; they only came on once a week, or at the most, every four or five days. It seemed to her that they had a tendency to get more frequent as she approached the period which we have just spoken of. After that period, instead of seeing her disease get better, as the physicians had told her, she was not long before suffering more. The pains not only increased in intensity, but the crises became so frequent that almost no day went on without her suffering, and she was obliged to stay in bed; sometimes the pains did not even leave her during the night, and prevented her from sleeping. As to social life, she could not participate in it, and if she by chance was obliged to do it and went out in the evening, she paid dearly for it the following day with a fearful attack. She suffered as much in Summer as in Winter. Except great fatigue and exposure to cold winds or draughts on the neck, she has not observed that any particular circumstance produced the attack. The pain, which was most of the time acute and shooting, almost always began in the right side of the nape of the neck and radiated forward to the forehead, leaving the eye intact. After one

or two hours, it went over to the other side, but did not become so intense here. It rarely remained unilateral. At the same time the patient complained of a pain in the temporal region; she felt as if it were pressed in a vise. The pain may come on at any time of the day, but she most often feels the headache on awakening. It goes on increasing, and it is only very late, at about 4 or 5 o'clock, that it begins to diminish; so that in the evening she is generally rid of it; but sometimes, as I have already said, it continues during the night. This generally happens if the crisis only begins at a late hour of the day. The patient felt relieved when she instinctively rubbed the nape. Of the employed medicaments, as quinine, aconitine and antipyrine, the two last ones only produced any relief; but as she got used to them after a few months, they were without any effect. Three years ago she also tried electricity (galvanization) for three months without any result. On examination, March, 1892, I found a deposit of myositis behind the right ear; it was voluminous and hard, and corresponded to the upper attachment of the sterno-cleido-mastoid muscle; below, it was very marked. It is sensitive to pressure; the patient feels a violent sensation similar to that at the moment of the crisis in the region of the forehead. There is another deposit in the trapezius on the same side, at about the breadth of two fingers from its attachment to the cranium. It is of the size of a small almond, and is placed in an almost horizontal diameter. On pressing on it, the patient feels acute pain at the crown of the head. Tumefaction and pain on pressure along the attachments of all the muscles to the cranium. It is the same thing with the upper attachment of the temporal muscles, especially in front. Both upper ganglia, especialy the first one, of the sympathetic nerve of the neck are swollen and sensitive to the touch.

On the left side induration of smaller size, and much softer than at the same place on the other side—that is, in the upper portion of the sterno-cleido-mastoid muscle. The first

ganglion is rather swollen. The upper attachment of the temporal muscle, especially in front, swollen and sensitive to pressure. This takes place only during the crisis, at other times the patient has no pain on pressure and nothing can be felt here. Massage succeeded marvelously well, in spite of the particularly deep-rooted character of the case, as a letter which I received at the end of March, last year, shows, and which I want to add to this observation.

This is what she writes:

"I take great pleasure in repeating that after three years I continue to be free from those terrible migraines which from my fifteenth year have troubled my existence for 40 years. They had even increased the last five years. Since I came to you, after hardly a month, I marvelously profited by the massage; my singular susceptibility to everything disappeared, and every day I felt more relieved. And finally, at the end of three months of treatment, I have been quite well and in perfect health, as regards my unfortunate head."

To these lines I only want to add that even after the first seance, the patient did not feel anything for a fortnight; that she had, while the treatment lasted, five crises, of which the last one took place ten days before the end of the cure, and was as violent as any of the others.

The muscular deposits and especially the one situated behind the right ear were always more swollen and sensitive to pressure the day preceding the attack, which fact made the patient say: "To-morrow I will surely have my crisis." She was not once mistaken. The state of nervousness into which the patient had got through so many years of suffering, was quite relieved, and she could begin to enjoy life. As to the muscular inflammations, there is no trace left of them; it is the same with the ganglia of the sympathetic nerve.

Observation XIII.

Continually Persisting Dull Pain.—Scaleni and Trapezius Affected.—The Deposits of Myositis in a Very Moderately Advanced Stage.—Cure After Three Weeks of Massage.

In September, 1893, a Swiss Lady, Mrs. B—n, whom I had formerly successfully treated for migraine, came to see me in Ragatz with her daughter, who was 14 years old, and had every day for two years suffered from headache. On examination I found muscular inflammations of the nape, but not in an advanced stage. I answered that I was almost sure to rid her from her pains, but I added that I had not much hope of obtaining a definite result in the short time (three weeks) which remained before I was obliged to leave Ragatz for Paris. At her solicitation, the treatment was, nevertheless, begun.

The patient, being very studious, the headaches had been a great obstacle to her education, and prevented her from thinking freely. Besides this, she was always in a downcast mood. The pain, of a dull character, almost never left her except in the night, or, at least, it did not prevent her from sleeping. It came on without the slightest cause, occupied the whole head to the eyes, and was attended with almost continual nausea. It was always aggravated before the menstrual period. The scaleni and trapezius are affected, especially on the left side. In the later one, on the same side, there is a rather extensive myositis, situated near the median line. On the right side, this is smaller; it has its seat higher up than the other one, at a finger's breadth from the attachment to the skull. We have to do here not with an induration properly so called, but with a resistance with not well defined outlines, the diseased tissue being gradually transformed into a healthy one. After three weeks of massage a little portion of the first named inflammatory deposit remained, and yet the pa-

tient declares not having suffered for several days. Nothing left of the other tumefactions. In a letter which I received from her mother at the end of last March, she writes that the pains have quite left her daughter, and that her character has also quite changed. As much as she was formerly sad and sullen, she is now lively and bright. What clearly proves the success, says the mother, is that one of her teachers declared to me yesterday that she is always the first in her class.

Everything makes me believe that—thanks to the influence of nature and her youth—the rest of the myositis that I have mentioned as remaining has disappeared.

Observation XIV.

Deeply Rooted Case.—The Symptoms Presentiug a Great Intensity.—The Most of the Muscles of the Neck Affected.—On the Left the Deposits Presenting More a Tumefaction than a Real Induration.—Persistent Case.

M. B—n, auctioneer, 45 years old, had suffered from headaches for 35 years. The pains, which were of a less violent character until seven years ago, since that period increased in intensity. They are especially provoked by damp and cold weather. The patient suiers less during the summer. A cold draught is sufficient to provoke tne crisis; physical fatigues and especially sitting up late in the evening have the same result. It is the same with moral fatigues and with all work requiring an intense application of mind. Thus he has been obliged to give up his favorife pleasure of playing cards for several years. The crisis most often begins during the day and sometimes continues during the night. But sometimes it happens to him to be awakened in the middle of the night by great pains, which leave him no rest. The head is so sensitlve that the patient, fearing to rest it on the pillow, stays up during the night, walking about in his

room; he only goes to bed when he is quite exhausted with fatigue. The attack lasts between twelve, and even, although rarely, thirty-six hours. The pain, which is always acute, sometimes becomes so violent that the patient, as he says, believes his head is going to split. The right side is most often affected, but sometimes the pain passes to the left after a few hours. It begins on a level with the right temple and rapidly extends towards the forehead, the vertex and the nape; from time to time, especially when he is directly exposed to the wind, it begins in the frontal region. The face, and particularly the eyes, become red; the veins become dilated and the face is from time to time covered by cold perspiration. Heat applied directly on the head relieves him somewhat. Antipyrine, which at the beginning relieved him, has for some time no longer produced any effect. He derived some advantage from a stay at Aix-les-Bains and Dax. Since last February he from time to time takes a preparation of morphine.

On the right I find voluminous induration in the sterno-cleidomastoid muscle, near to its upper attachment. There is resistance of the size of a small almond in the lower part of the scalenus anticus. A very hard cord passes obliquely through the trapezius as far as its attachment to the cranium. The upper attachment of the deltoid muscle is swollen and sensitive to pressure, especially in front. The supra-orbital nerve is very sensitive to touch towards the edge of the orbit, where it seems somewhat thickened and appears to be the seat of a perineuritis. The first ganglion of the sympathetic nerve is swollen and painful to the touch. On the left tumefaction of the trapezius and splenius at their attachment to the cranium.

Treatment by massage was begun May 12, 1894. I was obliged to interrupt the cure because of my going to Ragatz, in the last of June. During the following summer he had only two feeble crises. When at the end of next November, in consequence of the cold weather, he began to feel again some pains in the frontal and temporal region, he came again to see

me, asking me to continue and to finish the cure. After five weeks of massage no more muscular inflammation; the supra-orbital nerve was no longer sensitive to touch.

Since that epoch up to the first days of last October, when I saw the patient for the last time, his state had been most satisfactory. The provoking causes had, however, not been missing, and among them put in the first place draughts to which he has been so often exposed in the locality where he superintends the sale of horses in Paris (Tattersall). He also had influenza last spring, but when the other years he suffered martyrdom, this time he only felt a tendency to pain in the head, as he himself says. Besides this he can again play cards without feeling the slightest after effects.

BY THE SAME AUTHOR.

Traité théorique et pratique du massage. 2 édition. Paris, 1891, 1 vol. in-8°, 672 pages, - - 10 fr.

Traitement de la migraine par le massage. Paris, 1885, in-18, 121 pages, - - - - 2 fr.

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Le massage de l'utérus. Paris, 1889, in-8°, 214 pages, - - - - - - - 5 fr.

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Formulaire du Massage. Paris, 1895, in-16°, 280 pages, - - - - - - - 3 fr.