P A R T II.

P R A C T I C A L A P P L I C A T I O N

O F T H E T R E A T M E N T.

ILLUSTRATED BY CASES.

E. F. Cyriax. M. B. CH. B.

I N D E X.

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INDEX OF CASES

CHAPTER I.

Introductory

The object of Ling's system as well as that of the manual treatment is to replace pathological conditions by physiological ones.

This is effected by

I. Local treatment over the specially affected parts.

II. General treatment, by which we mean treatment of the constitution as a whole.

The reasons for the first are obvious enough, but the reasons for the latter are not quite so universally understood, in fact the modern practisers of Ling's system in a great many cases neglect the latter and only treat locally.

Treatment of the constitution as a whole should, however, always be included, even when apparently it is not affected or only very slightly.

The reasons for doing so are as follows:--

1. To enable the body to regain or assist it in its power of throwing off the normal toxins and waste matters in it. Normally there are a great many of

these in the general circulation, but no harm results as the body by means of vital chemical changes and by its power of resistance is able to throw them off. If it cannot do so, then disease, either general or local, sets in. By treating the constitution, however, we try to restore this power of elimination.

2. Any local lesion will itself in the course of time become a source of production of toxins and waste matters other than those just referred to, which tend to lower the vitality. If the body fails, as it were, to "rise to the occasion", then the constitutional symptoms may become very severe, and if not checked, the result may be fatal. Even if the body is able to throw off these toxins, etc., it requires a considerable effort to do so, and therefore in either case the manual treatment should be given to aid their elimination.

3. If there is a tendency for waste products to accumulate, these will tend to do so in the weakest parts of the body, i.e. those which have the least physiological power of resistance, and thus we must keep on stimulating them to avoid their becoming secondarily affected.

4. The actual cause of the disease may be over-

looked if we do not give general treatment. As an example, I may mention a spinal curvature. This may be due to some tender or irritative condition of some internal organ, say one painful ovary or kidney. From the reflex contraction of muscles over these parts, in the course of time, deformities in the spinal column will arise. (These causes are usually not mentioned in the literature on spinal deformities; they are, however, very important indeed.). To simply treat the latter condition, without treating the cause will, of course, only give very slight beneficial result, if any at all.

The experience of the Kellgren school has gone to show that the cause of many conditions is more often to be found in diseases of the internal organs than is generally supposed.

The manual treatment, by its local and constitutional treatment, greatly increase physiological power of resistance, both locally and generally. This is a very important factor in the cure, but it becomes still more so because we do not produce this power by external agents, but try to get the patient to be its source himself. We must endeavour to bring forth the active elements in the patient, however weak and feeble these may be at first, by getting him to use his own muscles, his own nerves, his own brain.

The first signs of his beginning to use these is the first sign of returning power of resistance, because we must remember that a cure does not commence with the first application of our treatment (external assistance) but from the moment that the patient's body begins actively to lend support to the result that the treatment is striving to obtain (internal co-operation).

I must here refer to the treatment of the constitutional disturbances which are found in acute conditions, not merely acute joint inflammations, but cases like appendicitis, pneumonia, specific infectious fevers, etc. The practisers of Ling's system have failed to procure benefit in such diseases by their gymnastic methods. I will not say they have failed utterly, because there have been one or two successes. The failures have, however, been almost universal and for this reason the Ling school has ceased to regard such acute conditions as amenable to gymnastic treatment.

The Kellgren school has, however, found that the improved manipulations at their command can enable them to treat such cases with success; Dr Wretlind, writing in 1873, in "Hygeia", the Journal of the Stockholm Medical Association, (March number, p.143) mentions that the Kellgren treatment has been used in

six cases of pneumonia, eight of typhoid fever, seven of gastric fever, two of rheumatic fever, two of scarlet fever, all of which recovered, excepting one case of typhoid; (see pneumonia page 279).

Dr Arvid Kellgren, in "Technic of Manual Treatment," describes cases of mumps, tonsillitis, diphtheria, cystitis, acute inflammatory gastro-intestinal catarrh, peritonitis, all treated by the manual method with success, and makes mention of several others, such as erysipelas, pneumonia, epidemic cerebro-spinal meningitis, etc. In his "Zur Technik der Schwedischen Manuellen Behandlung" 1895, a case of appendicitis is included as well.

My colleagues, Dr A. Möller, and Mr Harry Kellgren, have in their private practice given the manual treatment in a variety of such cases - diphtheria, scarlet fever, measles, influenza, tonsillitis, pleurisy, pneumonia, etc., with very good results. Personally, I have treated diphtheria, tonsillitis, epidemic cerebro-spinal meningitis, acute bronchitis, pneumonia, pleurisy, erysipelas, influenza, appendicitis, acute intestinal catarrh, etc. All of these recovered, with only one exception, a case of diphtheria who did not come under treatment until the 10th day of his illness.

When treating such cases, we have two points to

bear in mind.

I. To treat the local condition or conditions and raise the local power of resistance by diminishing congestion, stimulating the nerves to the parts, etc.

II. To treat the constitutional disturbance by raising the power of resistance of the body as a whole, presumably also aiding the process of antitoxin formation.

This is done by

(1) Diminishing cerebral excitement ;

(2) Stimulating the nervous system as a whole;

(3) Quieting down the circulatory disturbances;

(4) Stimulating the organs that bring nutrient matter to the system and assimilate it.

(5) Stimulating the excretory organs.

(6) Stimulating the spleen,

(7) Treating any organs or parts that tend to be secondarily affected.

Thus, supposing we have a fever without any very definite lesion, then we would give a so-called "general treatment for fever" as follows:--

Head exercise,

Spinal nerve frictions, specially cervical.

Heart vibration or shaking.

Side shaking, and getting the patient to take a few deep respirations.

Stomach exercise.

Kidney vibration or friction.

Spleen " " "

Bladder " " " (usually)

If we, however, do have a definite lesion, then of course we must treat that in addition.

With the above treatment, consisting of passive manipulations only (unless we except the voluntary respiratory movements) we can, in almost every case of fever, reduce the temperature and pulse rate and give from a subjective point of view, a sense of well-being and of feeling better and more comfortable. Sometimes I have observed a slight rise after the treatment, but in those cases where I could wait and test the temperature one hour afterwards, there was nearly always a fall below what the figure was when I took it before giving the treatment.

In slight cases of fever, however, say 99°-100.5°, one often gives an energetic treatment and the fever may rise a little and not sink again one hour afterwards; this however is compensated for by the general improvement in the condition of the patient as a whole.

Further details concerning the treatment of fevers it is impossible to lay down; the whole question is one of how much time to spend on the various organs, precisely what to give and how to give it. No amount of theoretical learning will ever enable anyone to give the treatment properly in these cases; they are amongst the most difficult. No two fevers

are absolutely alike, and here, often more than elsewhere, a great deal of skill is required, and for severe cases, a great deal of experience and natural aptitude.

As regards the actual application of the treatment, I have to state that the clothing of the patient should be loose and thin; in the case of females a dressing gown over underclothing will do very well, of course all corsets or whalebones, etc., being removed; men can content themselves with removing coat, waistcoat and braces. The various exercises and manipulations are in most cases given over this amount of clothing, unless contraindicated.

The time taken for each movement and the daily treatment.

Active exercises take from 1 to 2 minutes or so, passive ones usually longer, specially so in the case of head, throat, stomach exercise, etc., where speaking generally, a region is treated, not merely a definite localised muscle, nerve, etc.

The treatment is in acute conditions given twice or three times daily, or oftener if necessary in very severe ones; in chronic cases once daily is quite enough. Concerning the latter, Dr Arvid Kellgren says in "Zur Technik der Schwedischen Manuellen Behandlung" 1895, p.VII(translated): "One often, in

addition, reads that massage in order to produce its effect, must be given twice a day. Why? Is this so because Metzger does so? I do not think this necessary, as the case has to be a very severe one before I treat it twice a day."

In Part I. I gave a description of the more important exercises and manipulations such as they are found in Kellgren's treatment. I now propose to give notes of cases to illustrate it. They are mostly taken from my own practise from July 1898 to December 1900, though a few were treated at Stockholm while I was going through the course at the Central Gymnastic Institute. The great majority were done while I was practising in Sanna Rosendala in the South of Sweden. I have also inserted some additional ones (or further progress of my own) treated by my colleague Mr Harry Kellgren, L.S.A., with the same methods. The material that I have to offer is therefore not great, but I sincerely trust that in course of time I shall be able to have more important material and more extensive observations and results which can, of course, only come after many years of practise and experience.

In the description of the basis on which the principles of the treatment rest, I have in some

cases, entered into considerable detail; in others however, I have merely given a gymnastic prescription, which explains itself.

I must here take the opportunity of tending my very best thanks to Dr G. Engstrand, M.B., Upsala 1861, Doctor Primarius in Jönköping, who in some instances watched from time to time cases I was treating and frequently gave me his valuable aid, based on a practise of nearly 30 years, concerning the diagnosis in doubtful ones.

I must also thank my colleagues, Dr A. Möller, and Mr Harry Kellgren for having at different times shared with me the work of treating the various patients, and also for having assisted me in the taking of notes, etc. Specially do I wish to thank Mr Kellgren for having sent me various accounts of cases treated by himself, some of which had already been under me, continued the treatment under him, together with some others treated by him alone since I left Sweden in December last. His various reports will be found in due course in their proper places.

In all the cases of which I append notes, in none were any other therapeutic measures employed besides the manual treatment. In this way the results of the latter rest strictly on their own merits.

In the various fever charts which I append, if two points are marked in the same temperature column

they represent the temperature immediately before and immediately after the treatment. Two figures in the pulse column mean the same as regards the pulse.

CHAPTER II.

SPECIFIC INFECTIOUS DISEASES.

Under this heading I shall describe one case each of erysipelas, diphtheria, and epidemic cerebro-spinal meningitis, scarlet fever.

A. ERYSIPELAS MIGRANS.

I am not aware that this disease has ever been treated by the ordinary Ling's system, and quite rightly, for to simply massage such a case centripetally would only cause harm. The Kellgren school has however been successful in several cases; one is quoted by Dr Arvid Kellgren, in his "Technic of Manual Treatment", 1890, p.13.

I will give notes of one case I treated in 1900 in Huskvarna, a town about two-thirds of a mile from Sanna, where I was practising. There had been several other cases of erysipelas for some months past in that village, some of them treated at home had occurred in the same street as the one in which the patient was to whom I was called.

Karin O----., aged 5, came under treatment on Aug-29th, 1900. The history was as follows:

Everything apparently was normal until the 26th August when, after a restless night, she said she felt ill in the morning, had shivering attacks and complained of pain in the inguinal region. The mother noticed nothing unusual except that the child was feverish, and that there was a small scratch on the front of the leg at about the junction of the middle and lower third. In the afternoon the child got up, said she felt quite well and played about as usual.

On August 27th she got up feeling fairly well, but after a little she began to have shivering attacks and was feverish. She soon went to bed again (about 11 a.m.). The parents noticed that the redness they observed yesterday was now the size of a shilling and was very bright in colour.

On August 28th the child was worse and the patch of redness was now 3 inches in length.

On August 29th the patch was still larger and the child still worse, and I was called in.

On arrival at 6 p.m. on August 29th the child was looking very worn out (she had had hardly any sleep for two nights), feverish, and was shivering. Temperature 39.8°C., pulse 132. On inspection the right lower leg was swollen and bright red from

about two inches below the knee joint down to about the scaphoid bone; the original scratch could be seen as a slightly raised round patch, smooth and glazed looking, with a hole in the middle. The redness mentioned was well defined and had a sharp margin which was raised. Patient did not complain of much pain, but the inflamed area felt very irritating. There were many bullae, some an inch long, filled with yellowish watery matter; some of these communicated with one another. The skin was somewhat swollen. The extent of the inflammation is shown on figs. 207 and 208 .

There were enlarged lymphatic glands in the right groin; the kidneys and spleen were tender. The urine was scanty and dark. The heart sounds were normal.

After treatment temperature 39.3°, pulse 132, and the child went to sleep.

August 30th: She slept pretty well, better in fact that any night since the 27th. At 9 a.m. temperature 38.7°, pulse 120. The inflammation has spread up about 1 inch since yesterday. Treatment was given with more energy than last night; after it temperature 39.5°, pulse 122.

3 p.m. Temperature 40.3°, pulse 110. The bullae are getting larger, the inflammation has spread downwards on the foot about ½ inch since

Karin O....:

Fig. 207.

Figs. 1 and 2 were taken before the first time of the manual treatment. The extent of the erysipelas can be seen - it extends from the foot to the junction of the upper and middle thirds of the lower leg.

Fig. 208.

Date of the above photographs is August 29th, 1900.

this morning. The original scratch is now getting lighter, and the skin around it beginning to get white. The spleen is still very tender, but the kidneys not so much. The urine is still dark.

9 p.m. The inflammation is spreading up the leg, but only slowly, the amount to-day being about 1 inch. Temperature 40.3°, pulse 120; the same after treatment. There has been almost an entire absence of rigors to-day.

August 31st, 9 a.m. Child slept very well last night. Some urine passed this morning is almost normal. The inflammation externally has spread to about the middle of the external condyle of the femur; internally it has hardly spread at all during the last 24 hours and extends to the top of the tibia. Temperature 40.5°, pulse 116. After treatment, temperature 39.4°, pulse 96.

4 p.m. Most of the bullae have opened; no new ones are forming. The inflammation is now at the top of the external condyle externally; internally it is in the same place as yesterday. Temperature 40.2°, pulse 135. After treatment, 39.6°, and 120 respectively.

10 p.m. Leg in about the same condition as this afternoon. Temperature 39.7°, pulse 126. After treatment, Temperature 39.5°, pulse 120.

September 1st: Child says she feels better. First motion to-day since August 27th. Urine apparently normal. Externally the inflammation has spread up to the middle of the thigh; internally it has reached the lower border of the patella. Below it has reached the toes, and the whole foot is now involved. The whole inflammation, however, is less red and the original scratch is much paler; there are some white patches round the middle of the lower leg, and desquamation has set in. No new bullae. Temperature 39.1°, pulse 90. After treatment, temperature 39.0°, pulse 90.

Evening: Child has eaten some bread and milk to-day. Temperature 39.9°, pulse 120; after treatment, temperature 39.4°, pulse 108.

September 2nd: Child slept very well.

9 a.m. The inflammation has spread up as far as the middle of the thigh externally, but the redness is fading off from the knee upwards; internally it has not spread at all. The white patches on the lower leg are larger. Temperature 38.2, pulse 110. After treatment, temperature 38, pulse 104. Child ate some bread and butter and milk and sat up most of the day. No motion.

Evening: The inflammation has not spread at all since this morning and it is paler. Some tiny bullae are forming on the outside of the thigh.

Desquamation is proceeding over the lower leg and has begun in the foot. Temperature 38.9°, pulse 108. After treatment, Temperature 38.5°, pulse 104.

September 3rd: Child slept very well. The inflammation reached its maximum to-day and extends to about the junction of the upper and middle thirds of the thigh externally, anteriorly over the middle of the thigh; on the inner side to the lower border of the patella; posteriorly over the lower third of the thigh (See figs. 209 & 210). Had a motion (See chart for notes of motions from to-day onwards).

10 a.m. Temperature 36.2°, pulse 78. Treated. During the course of the day the child ate some meat, an egg, bread and butter, and some milk.

8 p.m. Inflammation stationary in thigh; lower leg white or pale red in most places. The original scratch has healed up. Desquamation of whole lower leg and most of the foot. The latter however is still swollen. Temperature 38.3°, pulse 106.

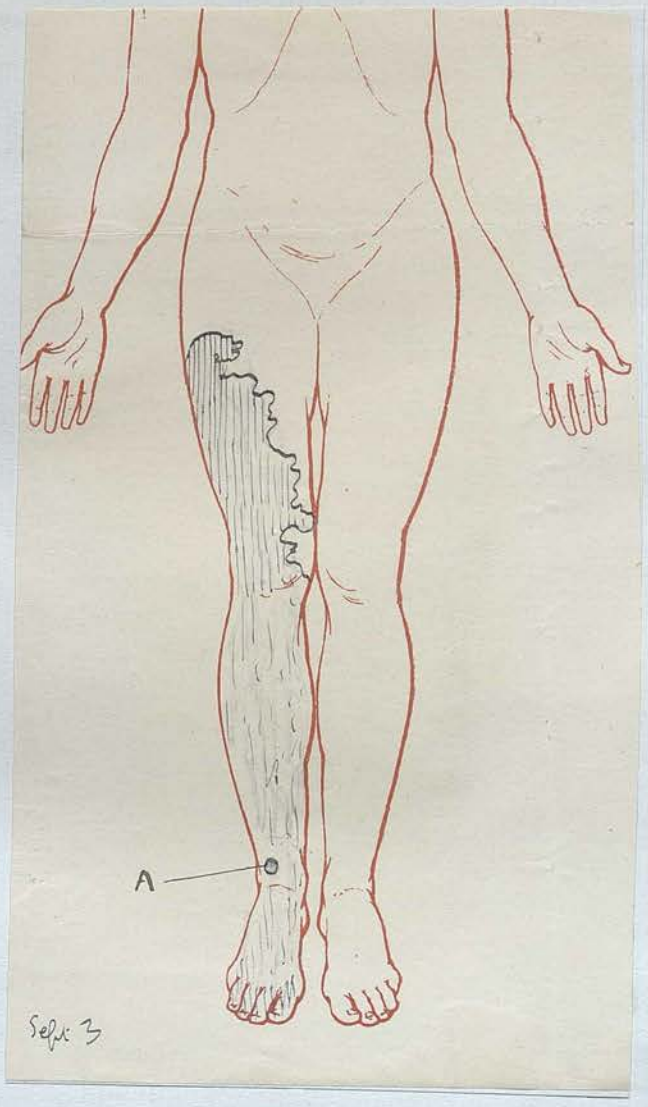
September 4th: Slept very well; appetite almost normal. Glands in groin about half the size they were when I first was called in on August 29th. The redness is fading away in the thigh. Child was up most of the day. Motion in the evening.

10 a.m. Temperature 37, pulse 85. Treated.

8 p.m. Temperature 39, pulse 110. Treated.

Karin Odman:

Fig. 209.



Figs. 209 and 210 were taken six days after the taking of Nos. 207 & 208 (i.e. Sept 3rd). The eruption has now extended to about the junction of the upper and middle thirds of the thigh.

Fig. 210.

September 5th: Appetite normal. Child up nearly all day. Redness fading; desquamation over thigh has set in. Foot still swollen. Morning temperature 37.4°, pulse 96; Evening 38.9°, pulse 118; treated on both occasions.

September 6th: Foot less swollen; no inflamed glands in groin. Morning temperature 36.5°, pulse 77, treated; evening temperature 38.5°, pulse 122; treated

September 7th: Improvement continues. Desquamation over all the inflamed area in the thigh. See temperature and pulse chart.

September 7th - 12th: Treated twice a day. Was up and walked about the whole time.

September 12th: The foot is hardly swollen at all and there is only slight redness in the thigh. The skin has come off everywhere in the lower leg: desquamation is still actively proceeding in the thigh and foot.

September 12th - 20th: Child was given some movements only once a day.

September 20th: The desquamation has finished and beyond some roughness the leg is normal. The

foot is not swollen at all. Treatment finished to-day.

I saw patient again on October 6th. She is very well and the right leg is a little rougher than the left, otherwise nothing. I saw her again on October 20th. The right leg is absolutely normal, just like the left.

The knee joints and hip joints remained unaffected throughout. The anklejoint was a little painful sometimes at first, but passive flexion and extension given with traction away from the lower leg, done through a small radius at first, but gradually increasing, removed it in every case for a few hours. After September 5th the ankle joint was not affected.

Treatment: This may be considered under two heads:

1. In the acute stage: I treated the fever in the usual way by head exercise, friction over the spinal nerves, over the kidneys and spleen; I gave heart and side shaking, stomach exercise, etc. On the leg the movements were given in a direction contrary to the venous and lymph flow; I tried by means of running vibrations in the upper leg, given centrifugally by shakings and gentle kneadings given over the affected part of the leg with a piece of

linen interposed between it and my fingers - to prevent the upward spread of the disease and to further the secretion into the bullae. The consequence was that the inflammation, which in the two days previous to the treatment had spread right up the lower leg, only spread an inch a day at most from the day it was begun. The nerves of the leg were stimulated in addition to the above.

2. In the subacute stage: After I had observed that the inflammation had not spread for two days and that the redness was considerably diminished, I gave passive movements at the joints of the leg to further the circulation. The intensity of these movements was increased day by day and after some time active movements were given as well (about September 8th). In addition nerve frictions on the leg, and of course the constitutional treatment was given the whole time.

The above manipulations on the leg caused but little pain: even this disappeared after the fourth day and she began to like the treatment and said she felt it did her good.

Karin Ödmann

Rum N:r

256.

	Aug 29th 6 p.m.	9 a.m.	30th 3 p.m.	9 p.m.	9 a.m.	31st 4 p.m.	10 p.m.	Sept 1st m.	e.	2nd m.	e.	3rd m.	e.	4th m.	e.	5th m.	e.	6th m.	e.	7th m.	e.	8th m.	e.	9th m.	e.
Pulse	132	120	110	120	116	135	126	90	120	110	108	78	106	85	110	96	118	77	122	88	94	96	90	90	100
	132	122	110	120	96	120	120	90	108	104	104														
Motion								m				m			m			m				m		m	

	10th e.	11th e.	12th e.	13th e.	14th e.
Pulse	114	118	116	100	100

The dotted lines show the fall in the temperature (in one case a rise), as taken immediately before and immediately after the treatment.

Two figures in the pulse column for the same hour show the difference before and after treatment.

On and after Sept 3rd the temperature and pulse were only taken once, before the treatment.

The treatment was given 3 times a day from Aug 30th to 31st twice a day from then until Sept 9th and once a day after that

The temperatures were all taken per rectum

B. DIPHTHERIA.

Two cases of this where the manual treatment was given are found in Dr Arvid Kellgren's "Technic of Manual Treatment," 1890, pp. 114-118.

Cases of nasal, tonsillar, pharyngeal and laryngeal diphtheria treated December 1899-January 1900.

E.F.C., aged 25, had been feeling weak and not "up to much" for several months, and had been looking after a child with diphtheria from November 27th to December 3rd, 1899, which tired him out very much. On December 2nd he felt some uneasiness in his tonsils. He slept badly that night and on December 3rd redness appeared over both tonsils; in the evening of the same day a small patch of membrane could be seen on the left one.

December 4th: Membrane spread to right tonsil, and of a grey colour. Swallowing difficult. During course of the day the uvula became enlarged and the voice slightly husky.

December 5th: During night of 4th-5th uvula was so long that it continually touched the patient's tongue and fauces, preventing any sleep; great amount of salivation. Voice got worse during course

of day. In the evening the bacteriological laboratory reported that a culture sent in yesterday contained diphtheria bacilli. Some thick stringy mucus from nose has been coming away to-day continually; sometimes it was tinged with blood.

December 6th: Patient delirious during the night and slept very little indeed. On waking up the voice was found reduced to a whisper. Bloody mucus from nose in great quantity.

December 7th: Patient hardly slept at all: occasional delirium during the night. Symptoms generally speaking about the same as before, excepting that salivation was slightly less and swallowing a trifle easier.

December 8th: Patient slept fairly well; membrane diminishing in size, salivation much less. Bloody mucus from nose less in amount.

December 9th: Tonsils smaller and for the first time one could see that the pharynx was full of grey membranes.

December 10th: Only a small patch on right tonsil. Very little bloody mucus coming from nose.

December 11th: Patient coughed up blood clots continually.

December 12th: Still coughing up blood clots.

December 13th: Membranes on tonsils and in pharynx practically gone, some inflammation still visible. Swallowing quite easy.

December 14th: Some inflammation of right tonsil, left normal. Voice no better (still a whisper).

December 17th: Patient went out for a short walk (temperature about -10°C) tonsils, etc., normal in every respect.

December 18th: Went out for a drive of 1 hour.

The treatment was now stopped until December 21st, owing to unavoidable circumstances. Patient was treated December 21st, 22nd, 23rd; then there was another break and after that the treatment could only be given about every other day or so, i.e. December 28, 29, January 1, 3, 6, 8, 10, 11, 12; then the treatment had to be stopped altogether. Already, on Dec. 21st, the voice had begun to come back: after January 12th it continued to improve by itself. By February 10th the voice was normal and the patient could sing as usual. A slight attack of peripheral neuritis causing the patient no inconveninece beyond a feeling of pins and needles in

his hands and feet supervened. After lasting three weeks or so, it disappeared without treatment.

The lungs and heart remained healthy throughout.

Temperature and pulse chart herewith.

Treatment: At first shakings and vibrations of the larynx, pharynx and trachea, etc., frictions over the nerves in these parts, chiefly the superior and recurrent laryngeal, also great occipital and spinal nerves, friction over the kidneys, spleen; stomach exercise, head exercise, etc.,

Afterwards in the convalescent stage, the treatment was specially directed towards stimulation of the nerves of the larynx and the nervous system generally. No serum was used, the patient absolutely declining to have any.

February 1901: Patient has been very well ever since.

Rum N:r

Diagnos:

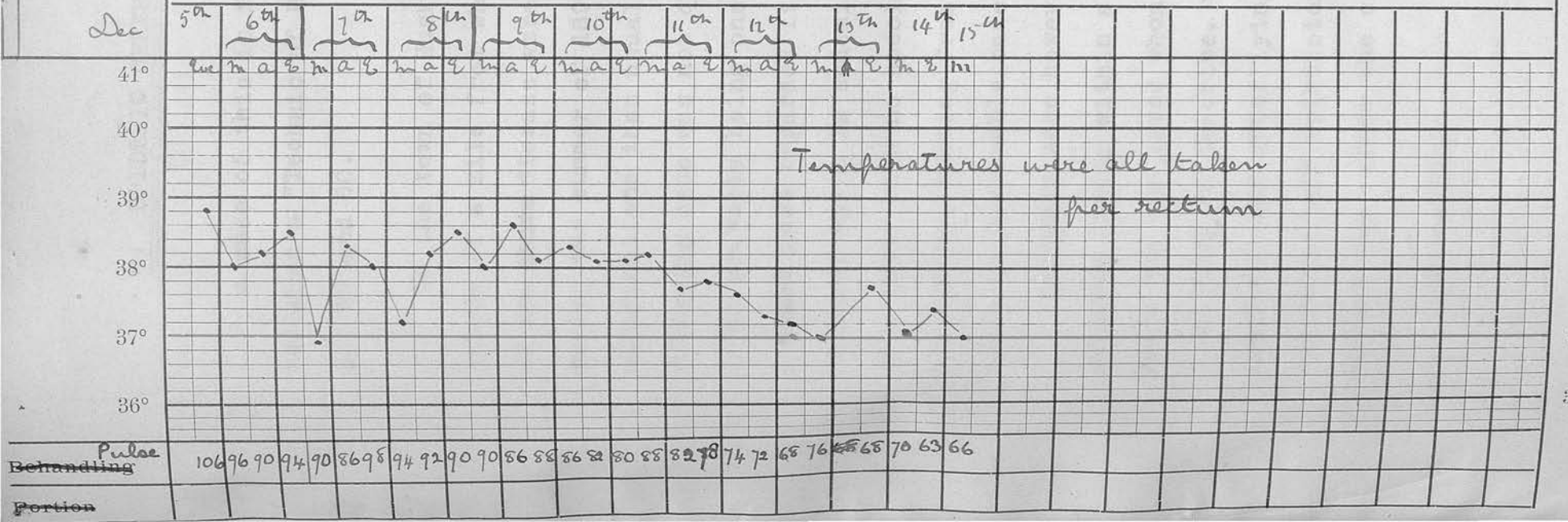
Ink. d. 189 .

Sjukn. d. 189

Utskr. d. 189 .

Case 1 a–13 – ; æt 25

Diphtheria



Behandling

Portion

C. EPIDEMIC CEREBRO SPINAL MENINGITIS.

A case of this is found mentioned in Dr Arvid Kellgren's "Technic of Manual Treatment", 1890, pp. 59 and 60.

In the town of Huskvarna, situated about two-thirds of a mile from where I was practising, cases of the above disease were continually being notified; during the summer of 1899 there seemed to be more notifications than usual. The diagnosis of the following case was not quite certain, though I took it as probably being one of the above: otherwise I might have regarded it as another peculiar form of fever which is endemic to the town, and consists of a fever with no special symptoms beyond cerebral irritation, lasting from 6 to 8 days and ending by lysis in favourable cases.

Accounts were however given me of several other children living within a short radius from the house where the one lived whom I treated and whose case I am going to describe, who had very nearly the same symptoms, and after lying ill with high fever, great irritation and opisthotonos, died on about the 10th to 14th day after the commencement of the condition.

Elof Stahl, male, aged 2½, had been ill since August 2nd, 1899. The condition commenced with sudden fever and pain in the head. A medical man who was called in prescribed antipyrin; and a few days later camphor and antipyrin; no diagnosis was given, and on August 18th Dr A. Möller and I were called in.

On examination child lay with retraction of the head, photophobia, great tenderness over the skull and cervical nerves. The parents said they had noticed spasms occasionally and once a condition of opisthotenos. None of the latter symptoms were evinced however during the time of treatment. Child seemed quite conscious. Pulse 172, temperature not taken.

Treatment: Head exercise, spinal nerve frictions, side shaking, stomach exercise and spleen frictions, etc.

August 19th: Morning. Condition about the same as before. Temperature 103°C. Pulse 160. Treatment as before.

Afternoon, child worse; semiunconscious, pupils somewhat dilated, great tenderness on slight percussion of the head and on spinal nerve frictions. Child occasionally got somewhat opisthotonic and threw itself about. Temperature 104° (axilla), 105° (rectum) pulse 192, irregular

Treatment as before: after 20 minutes, temperature (axilla) 102.5, pulse 178. Child perspiring very much. After another 45 minutes of treatment temperature (axilla) 101.5°, pulse 172; child perspiring a good deal.

Evening Temperature: 98.6°, Pulse 90. Treated.

August 20th: Child's temperature in the morning was 98.5°, no treatment however was given until the evening, when the temperature was 103.8°, pulse 140. Some irritation, but otherwise nothing special. After treatment temperature 102.6°, pulse 120.

August 21st: Treated once. Temperature 96.8°, pulse 72. After treatment, temperature 96, pulse 65.

August 22nd: Treated once, in the evening. Child apparently normal. Temperature 99.4°.

August 23rd: Appetite returned, child sitting up and has been walking about; rather weak, but otherwise normal.

August 24th to 28th: Treated once daily until the 28th when the treatment was stopped. Normal.

October 1900: Beyond a slight cold once this summer, child has been very well ever since.

Epidemic cerebro spinal meningitis

Rum N:r

Diagnos: Name. Olof Stahl

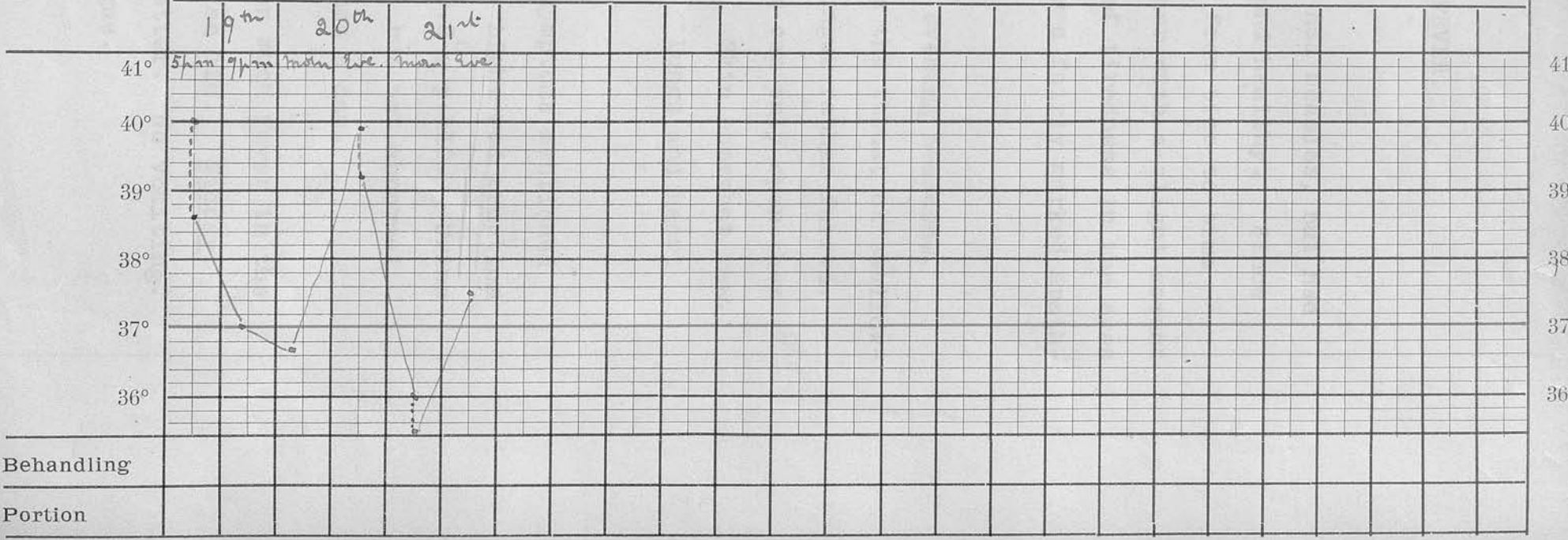
Ink. d. 189.

Sjukn. d. 189

Utskr. d. 189.

The dotted lines indicate the fall in the temperature as taken immediately before and immediately after the treatment.

The temperatures were all taken in the axilla



Nr 779. Hasse W. Tullberg, Stockholm. K. M.

D. SCARLET FEVER.

Miss H..... A....., aged 7.

Patient when quite young had measles, but had always been otherwise strong and healthy. Since beginning school, patient has from time to time begun to have headaches together with a slight amount of fever and vomiting, sense of tiredness in the eyes and on these occasions she had a fairly marked apathetic look.

25th Jan. 1901: In the evening headache, vomiting, some coryza, pain in the throat on swallowing; tonsils somewhat red, tongue rather furred. Eyelids somewhat swollen; she can only open them with difficulty, photophobia. Skin somewhat raw. No fever, pulse full, strong. Lungs and heart healthy.

26th Jan. Morning: The symptoms mentioned yesterday are still present. Light red eruption on the trunk. Temperature 40.2°, p.110. Urine very scanty, and concentrated, but not abnormal otherwise. Treated three times a day.

27th Jan.: There has been much fever in the night. Temperature 40.4, pulse 120. Midday: headache, throat ache much better. No vomiting. Characteristic strawberry tongue.

Evening: Typical scarlatinal rash, very marked on the whole body, excepting the forehead and round the mouth. Frequent micturition , urine contains urates. Temperature 39.5°, pulse 110.

28th Jan. Morning: Slept well. Disposition much more cheerful; appetite returned. The rash is somewhat paler. Temperature 37.5°, pulse 90, strong and full.

Evening: Temperature 37.5°, pulse 100. Desquamation considerably advanced. Eyelids better. Tonsils and tongue not covered any longer. Appetite good; cheerful frame of mind.

29th January: Morning: Temperature 37.3°, pulse 84. Appetite and frame of mind very good. The kidneys, which the whole time have been very sensitive,are not so tender now. Urine normal.

30th January: Temperature 37.2°, pulse 74. General condition very good. Desquamation not yet quite completed. Kidneys still somewhat tender. Urine normal.

The treatment all this time has been:

(1) Head exercise PP.

(2) Throat exercise PP.

(3) Spinal nerve frictions PP.

(4) Stomach exercise PP.

(5) Kidney and bladder treatment, PP.

(6) Stretch lying running nerve frictions PP.

From to-day onwards the patient got a general strengthening treatment. After one week patient left cured, and feeling stronger and better than before the illness.

The above case has been kindly sent me by my colleague Mr Harry Kellgren. Personally, I never saw the case.

CHAPTER III.

DISEASES OF THE SKIN AND ITS APPENDAGES.

I can only give one example, viz; a case of alopecia totalis.

Axel J. aged 16, came under treatment, October 1st, 1900.

History: In 1892 he had an accident and broke one leg. for which he was kept in bed one month; the same day that he got up he took a ride in a sledge which upset and he broke his arm, and for this he was kept in bed another three weeks. During the first week of this period his hair began to fall out, and in about 14 days he was perfectly bald. An ointment was prescribed, and after using it for about three weeks, some of the hair on the front of his head came back, but none at all over the back. The condition remained practically unchanged until the summer of 1900, when a few stray hairs returned, chiefly in two patches, which latter could be seen now, although the patient said that the hairs for the most part fell out again and that these patches are now much smaller

than they were. There is no history of any fever or of hereditary tendencies to baldness, neither are there any history or signs of syphilis.

Examination: There is a certain amount of dark hair growing at the areas A. and B. in figs. 211 & 212 (page 271). Between A. & B. and below A. & B. on either side to about the upper margin of the ears, are a few very fine downy hairs. There are a few dark hairs, from 5-12 in number at C. & D., otherwise the rest of the scalp is smooth, shiny and absolutely devoid of any hair or down. The margins of the growths are sharp and well defined, and the hairs are as long there as in the centre of the areas.

Four photographs of the patient's head are seen in Figs 213 - 216, on page 272. They could not be taken until October 8th owing to the state of the weather. Kidneys and spleen tender, but otherwise nothing abnormal.

Treatment: Head exercise of a specially modified nature; Standing at the back of the patient I laid my hand on his parietal areas (as in fig. 217) I then moved my hands upwards towards one another (Fig. 218) letting the scalp move with them, (throwing it into longitudinal folds in so doing) and then back again. This was done alternately for some minutes. By this means the vessels were alter-

Fig 211
&
212.

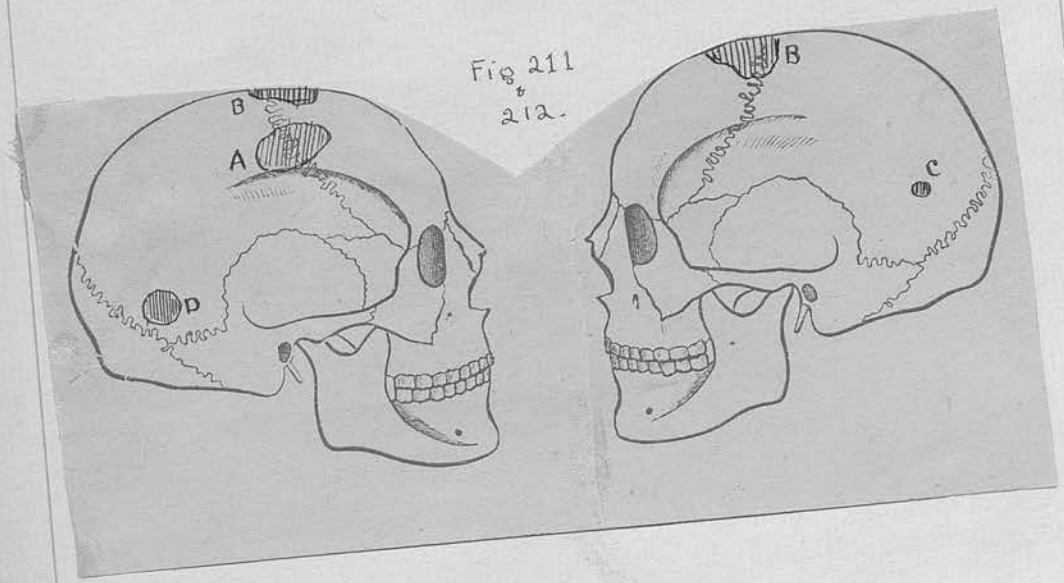


Fig 217

Fig. 218.

Fig 213.

Fig 214.

Fig 215.

Fig 216.

Case of Axel Johanson.

Four photographs showing the extent of the baldness, taken at the beginning of the treatment on the first fine day available.
(October 8th.)

nately elongated and shortened and thus the circulation in them was improved and any existing hair follicles filled with debris were alternately compressed and then opened out: this would tend to press out that debris and get fresh air drawn into them. This manoeuvre I also did with one hand over the frontal, the other over the occipital area. In addition I gave strong nerve frictions to stimulate the scalp, etc. and a few general movements for the constitution.

Progress: October 13th: Patches of soft downy growth have appeared over some areas in the parietal and occipital regions and a few black hairs are appearing at a spot in the middle line just above the lambda (the spot is marked E. in figs. 219, 220)

October 19th: The whole head is now covered with soft downy hairs, they are, however, very thin and scarce for 1½ inches on either side of the middle line between A & B, & E. The dark hairs on the pre-existing areas are getting longer and round about them new dark hairs are appearing.

November 1st: The E. area is about the size of a 6d. and the number of dark hairs about 50.

The C. & D. areas are now twice the size and have each about 40-50 dark hairs. The downy growth

over the rest of the scalp is getting longer all the time.

November 10th: Patient got his head clean shaven.

December 1st: A good part of the downy growth is turning dark: all the dark areas are larger.

December 20th: Patient finished treatment under me. The dark areas are shown in figs 219 & 220; the rest of the head is covered with downy growth with here and there some dark hair. Photograph showing the amount of hair is shown in fig. 221.

The patient is continuing the treatment under my colleague, Mr Harry Kellgren.

A case of lupus erythematosus cured by the manual treatment is found described in Dr A. Kellgren's "Zur Technik der Schwedischen Manuellen Behandlung" 1895, p.149. and 150.

Figs. 219 and 220

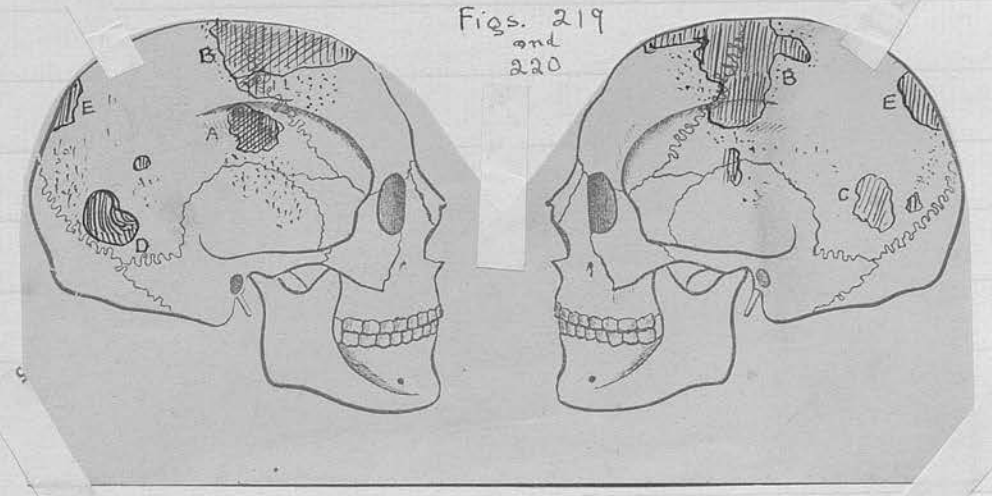
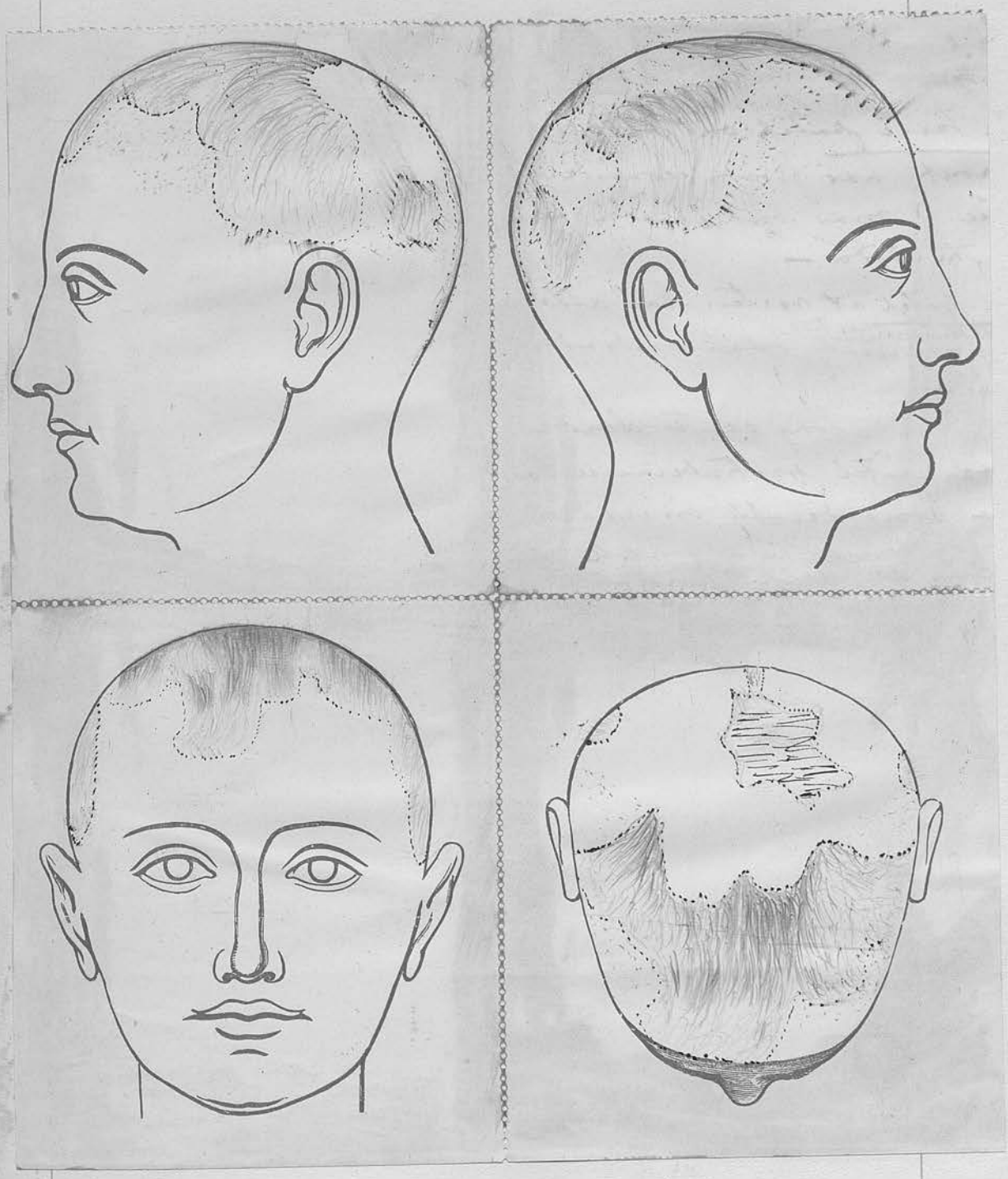


Fig. 221.

Mr Harry Kellgren, who has continued the treatment of the patient, sends me the following report from Sanna, dated March 3rd, 1901.

The large patcheson the top and in front have grown considerably since Christmas 1900, chiefly forwards and laterally, not so much backwards. The patch at the vertex has also grown in thickness and extent, chiefly backwards and downwards. The line along the middle line down to the occipital protruberance is a small nucleus of some 20 dark hairs.

Mr Kellgren sent me four drawings to show the extent of the hair, which I give herewith.
(figs 224 to 227.)



Figs 224-227.

CHAPTER IV.

DISEASES OF THE RESPIRATORY ORGANS.

Under this heading I shall give three cases, one each of the following: Acute pneumonia, acute pleurisy, and chronic phthisis.

A. ACUTE CROUPOUS PNEUMONIA.

Prof. Branting was, I believe, the first to attempt to treat acute pneumonia gymnastico modo. Professor Georgii in "Kinetic Jottings" 1880, p.206, says: "In some forms of bronchitis and pneumonia ..... it might not be unreasonable to expect that gentle vibrations, percussions, frictions, pressure on the pneumo-gastric nerve, etc. (in such positions as the patient's condition would permit) might, on the one hand, help in causing resolution, etc., and on the other, by assisting expectoration, to relieve the smaller bronchial tubes loaded with mucus. A case of acute pneumonia successfully treated in 1847 by Branting seems to encourage imitation."

Prof. Hjalmar Ling in Branting's "Efterlemnade Skrifter", 1882, p.XXVI. refers to the above attempt on Branting's part, and he says further that his attention was in 1875 again drawn to the possibility of treating inflammation of the lungs by gymnastic measures, by reading Dr Glatter's account of Kellgren's method for it. (Dr Glatter was Professor Emeritus at the academy of Vienna.)

In 1872 Dr E. Wretlind, a Swedish medical man, went on a tour round Denmark and Germany to visit the various establishments for gymnastics, electricity, etc., with a view to observing their results and giving a report. The latter he published in the December, 1872, to March 1873 numbers of Hygeia, the monthly journal of the Swedish Medical Association. Of the various establishments Dr Wretlind visited none gave results so splendid as those he saw in Kellgren's Institute in Germany. He says in the number for March 1873, page 143, that Kellgren has treated by his method the following acute cases: six pneumonias, eight typhoids, seven gastric fevers, two rheumatic fevers, three colics and two scarlatinas. He goes on to say (translated)"Of these one typhoid died of weakness, the others were cured. In the majority of these cases medical men had been called in first, and in many Kellgren was only summoned when, sometimes after a consultation between two or three of them,

they had declared death to be inevitable."

Dr Wretlind did not forget the astonishing results he saw. In "Om Rörelsekuren eller Kinesitherapiën" 1874, pp.55-56, he again refers to this treatment of acute conditions and in 1899 he wrote in "Hälso ach Sjukvårdslära", p.90, concerning inflammation of the lungs (translated): "On the other hand quite free from danger is a method of treatment invented by the Swedish Gymnast, Henrik Kellgren." He describes briefly the modus operandi and adds: "These exercises have an undisputable power of diminishing the spreading of the consolidation in the lungs and thus shorten and alleviate the course of the disease. Yes, in certain cases one can say that the disease is cut short. We build this assertion on our own practical experience."

In "Eira" a medical journal published in Stockholm, in the number for 15th April 1889 on page 203, I find the following: (translated) "That pneumonia can with great benefit be treated by Kellgren's method has been actually proved ..... The credit indisputably belongs to Kellgren of having shown that the sphere of the movement cure is by no means almost exclusively confined to chronic conditions."

Dr Arvid Kellgren in "Technic of Manual Treatment" 1890, p.69, says "I do not wish to be considered as saying too much before others have had the same experience, but I have, and my brother before me,

treated cases of pneumonia with nerve friction between the shoulders and vibrations on the thorax for the lumgs, nerve frictions in the neck and over the dorsal sensory nerves for the fever and headache, and petrissage of the abdomen for the circulation generally, without help of medicine, and have always succeeded."

The objects of the manual treatment in pneumonia are as follows:--

I. To diminish the virulence of the inflammatory process in the lungs by raising the vital activity of these organs and removing the tension by promoting the venous return. This reacts favourably on the heart.

II. To treat the constitution as a whole and thus reduce the fever, increase the eliminative powers and accelerate the formation of the natural antitoxin.

This is accomplished by -

1. Removing the impediments to respiration which lie in the muscular apparatus. These are found to be:

   (1) Contractions in the intercostal muscles over the affected lobe or lobes. This is analogous to the contraction of the anterior abdominal muscles in acute peritonitis, etc. We remove these by giving vibrations over the contracted areas and frictions on the corresponding dorsal nerves simultaneously. (See also 5 on page 282).

   (2) Deficient action of the diaphragm, with or without marked contraction of the abdominal muscles. This is treated by subcostal vibration and shaking, bladder vibration and stomach exercise.

In addition, these impediments can to a great extent be removed by getting the patient to respire deeply. This must be done, beginning with small respirations and increasing them each time; gentle pressure with one hand on the abdomen during expiration will greatly facilitate matters.

2. Removing the impediments to respiration that lie in the lungs themselves. Those are partly removed by restoring the muscular mechanism to its normal condition, as described. In addition we give vibrations over the affected areas which penetrate them.

3. Stimulating the nervous elements of the lungs. We give frictions over the spinal nerves about the points where they communicate with the corresponding sympathetic ganglia. The nerves on the affected side over the affected lobe are always tender. Frictions should be given specially over those nerves that supply the intercostal spaces where contractions exist, as already described.

4. Guarding against heart failure by diminishing the resistance in the lesser circulation as mentioned already, and by quieting its over-excited action by heart vibration and shaking, and reflexly by stomach exercise. Better cardiac action brings in its turn improvement in the lesser circulation. Frictions over the 4th, and 5th dorsal nerves in addition may be given while applying the local heart treatment.

5. If pleurisy is present, as it often is, we must treat that. This is done by giving vibrations over the pleuritic part and removing the contraction in the intercostal muscles as described. By restoring the intercostal muscles to their normal state, we diminish the pain; the rhythmical contractions of the latter remove congestion by aiding the venous return in the pleura and intercostal spaces.

Effect of deep respiration on pleurisy: It is an important fact that although one or two deep respirations cause great pain yet if several, say 10-12, be taken, the pain diminishes each time and remains better for some hours in most cases.

6. To treat the constitution as a whole, by means of head exercise, cervical, dorsal and lumbar nerve frictions, kidney frictions, etc. I must here mention that in two cases of pneumonia I have treated, the kidney region of the affected side was much more tender to touch than that of the opposite side. Stomach exercise should also be given. It acts beneficially by reflexly quieting the heart's action (as already mentioned) and acting depletingly on the lungs.

The treatment during the convalescence from pneumonia is as follows:

(1) To tone up the lungs by nerve frictions on the nerves that supply them, and by breathing exercises, chest expansion, etc.

(2) To tone up the constitution.

Convalescence from pneumonia has been treated at the Central Gymnastic Institute for years past; eight cases are mentioned by Prof. Hartelius as having been treated in 1863 ("Om Sjukgymnastiken vid Gymnastiska Central Institutet i Stockholm under år 1863", 1864, p.78.), 6 cases in 1864 ("gymnastiska Iakttagelser", 1865, p.91) and these were by no means the first of their kind treated there. Concerning this I would like to point out an error of Dr Wide, who, in "Handbook of Medical Gymnastics," 1898, p.197

ascribes to himself the credit of having been the first to use gymnastic means as an after treatment for acute pneumonia.

Klas Svenson, aged 33, coachman, moderate drinker of alcohol, says he caught a chill on March 24th and felt rather weak for the next few days. On March 27th he drove in from Sanna to Jönköping, distance about three miles, but felt very weak, had a shivering attack of ten minutes' duration and was obliged to come home at once and go to bed.

March 28th, 1.30 p.m. Patient in bed, complains of great headache, otherwise nothing. Temperature 40·5, pulse 140. Nothing abnormal to be heard or felt. I gave him the ordinary treatment for fever.

In the evening I again saw the patient. He was drowsy, and I did not examine his lungs or heart. I gave him a short treatment and he said he would go to sleep. Temperature 40·1, pulse 120.

March 29th: Patient slept badly. High fever 40·8, pulse 122, respirations 41. The left side does not move quite so well as the irhgt. There is accelaration of respiration, which is short and shallow. No pain on deep respiration. There is tenderness over the 4th to 11th dorsal nerves near

the spine on the left side and the intercostal muscles in the 5th to 9th spaces are contracted. On percussion there is some amount of dulness over the 4th to 10th ribs posteriorly and 6th to 8th laterally. The breathing over this area is harsh, vesicular, and there are some fine crepitations. No sputum. Treatment four times to-day. Temperature, respiration pulse, see separate chart.

March 30th: There is absolute dulness on percussion over the 4th to 11th ribs posteriorly, 6th to 9th laterally, and over the lower lobe generally. The breathing is tubular, with no crepitations, unless a deep breath is drawn.

Treated three times. In the evening frothy sputum.

March 31st: Patient has now very much pain over about 7th and 8th ribs in the mammary line, and laterally over the 5th to 7th ribs. The sputum is now here and there streaked with blood, and is very thick.

April 1st: General condition about the same as yesterday. The spinal nerves, as before mentioned, are still very tender. Treated three times.

April 2nd: Patient wandering in his mind most of the day. Sputum is now partially greenish streaked with blood, otherwise thick white, also

streaked with blood. Treated five times. In the evening patient ate a little soup, otherwise ever since March 28th, he has taken hardly anything except a little milk.

April 3rd: Patient wandering in his mind most of the day. The lung symptoms are about the same, excepting that there is not so much pain in his side. Treated six times.

April 4th: Pulse dichrotic. Herpes labialis. 05% albumen. Patient wandering in his mind until about 6 p.m. Then he recovered his senses, and temperature, respiration and pulse all sank somewhat. (Pseudo-crisis). Treated six times.

April 5th: Temperature, pulse, respiration higher again. Patient clear in his head most of the day, excepting this morning. 05% albuminuria. The temperature could be taken again to-day properly, but on April 3rd and 4th this was very difficult, as patient would not keep still. Treated four times.

April 6th: Not wandering in his mind at all to-day. There is ·1% albumen. In the evening patient felt very sleepy at 5 p.m. and began to perspire very much indeed. Treated three times.

April 7th: Patient slept almost without stopping until 8 a.m. He then woke up feeling well,

but very weak. He was drenched with perspiration in the night and his clothes were changed several times: this did not wake him. Temperature 37.1°, pulse 80, respiration 30. The left side moves somewhat with respiration; there is no dulness on percussion, but many sounds are to be heard over the affected area, varying from fine crepitations to coarse ones. Appetite good all day. Patient stopped in bed all day. Treated twice. The spinal nerves already referred to are still very tender.

April 8th: Some fine crepitations to be heard, otherwise nothing marked. Patient got up to-day and says he feels well though weak. He could, however, walk about a good deal.

April 9th to 10th: Treated twice. Fine crepitations still present and patient coughs up some white frothy stuff.

April 11th: Patient went out for a few minutes. Treated once. Lungs normal. No crepitations: no sputum.

April 11th to 15th: Treated once. Patient went out on the 15th for ½ hour.

April 16th to 22nd: Treated once daily. On

22nd patient did several odd pieces of work such as carrying window frames about, taking them out, etc.

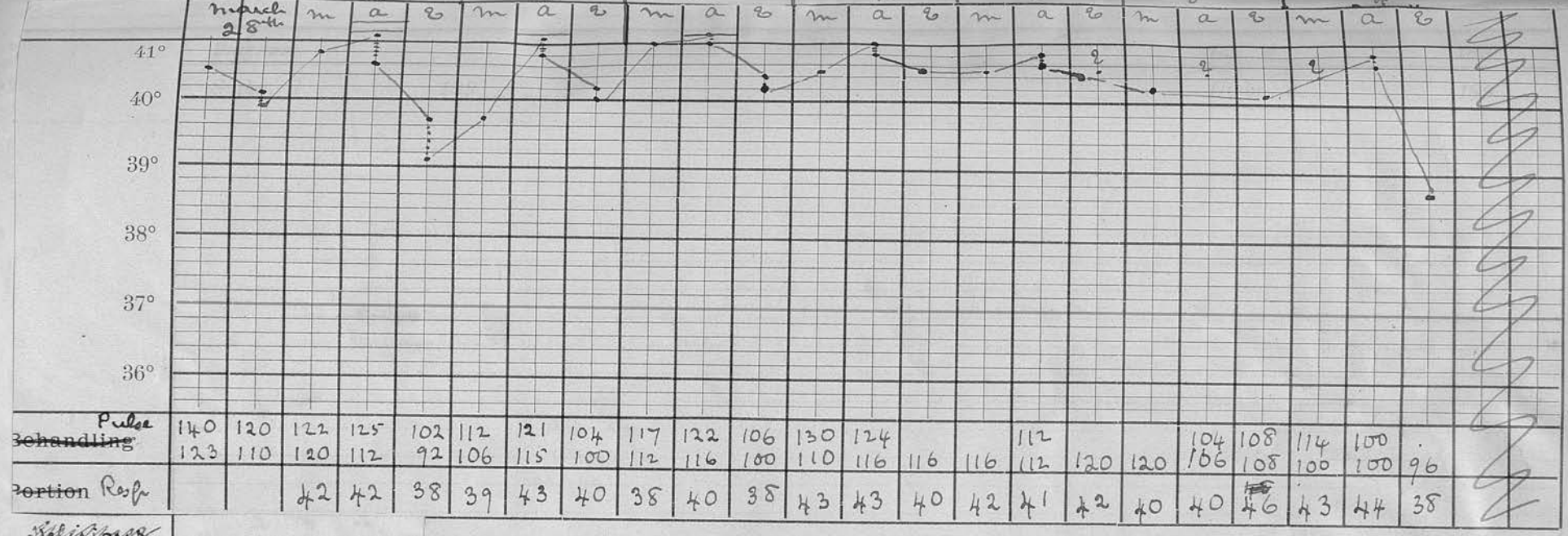
April 28th: Patient has been working most of the days this week. Treated once daily.

April 29th: Patient drove out for 1 hour.

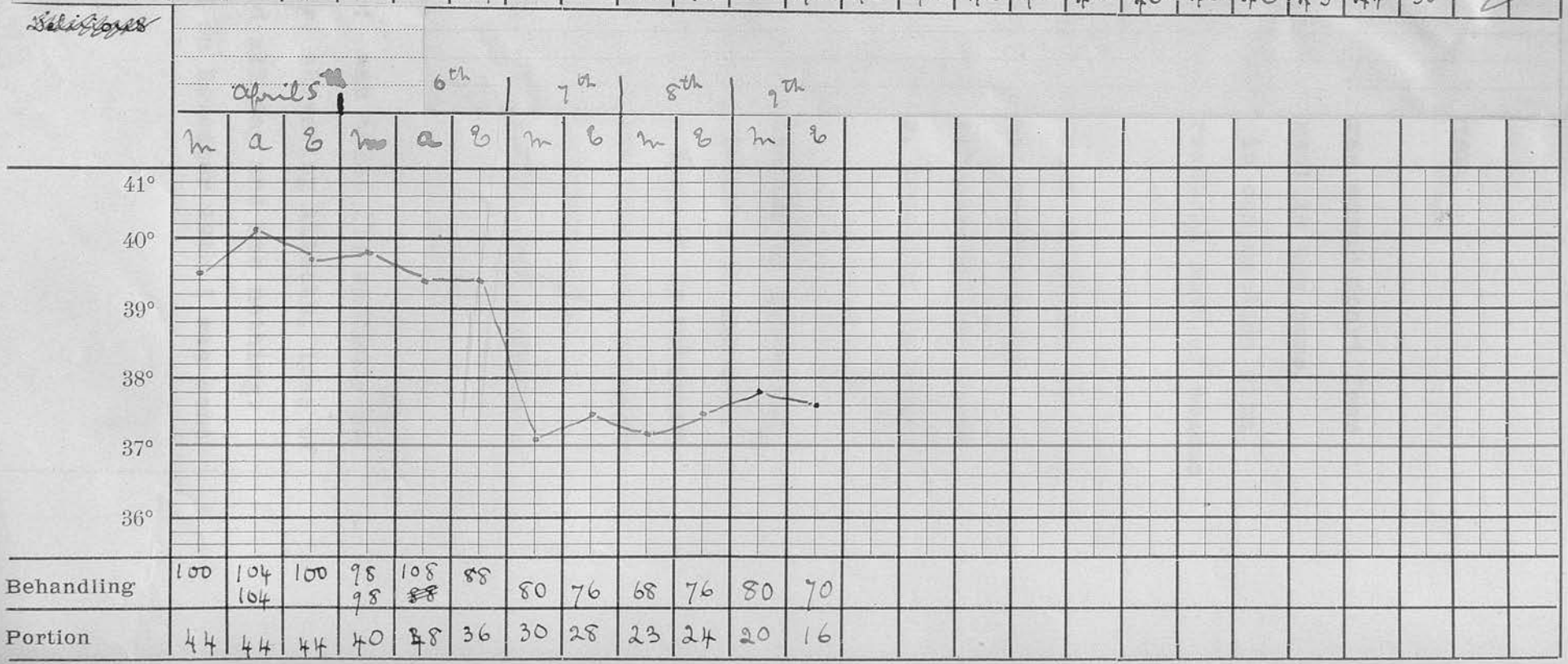
May 1st: Patient drove out 1½ hours in snow-storm. Says he feels very strong.

May 9th. Patient quite well and strong. Weighs 74½ kilos.; just before his illness he says he weighed 74. Treatment finished.

Feb. 1901. Patient quite well ever since.



Pulse Behandling	140 123	120 110	122 120	125 112	102 92	112 106	121 115	104 100	117 112	122 116	106 100	130 110	124 116	116	116	112 112	120	120	104 106	108 108	114 100	100 100	96	
Portion Resp			42	42	38	39	43	40	38	40	38	43	43	40	42	41	42	40	40	46	43	44	38	



Behandling	100	104 104	100	98 98	108 88	88	80	76	68	76	80	70												
Portion	44	44	44	40	48	36	30	28	23	24	20	16												

B. ACUTE PLEURISY.

This condition may of course occur apart from pneumonia, but the local treatment is the same, whether it is present alone or in conjunction with the latter. Constitutional treatment must of course be added.

In the subacute stage, we must endeavour to restore the parts to their normal condition by giving respiratory exercises, vibrations, and nerve frictions on the affected areas, treating the constitution, etc.

Attempts to treat acute pleurisy by gymnastic methods have been made once or twice with success; the first account I can find is that of Dr Melicher, Vienna, who obtained good results from such proceedings. The fact is mentioned in Branting's "Efter lemmade Skrifter," 1882, p.XXVI. and elsewhere.

Hugo S. , aged 15; was taken ill suddenly on November 18th with fever, shivering attacks, loss of appetite; he was in bed all day and ate nothing. He slept very badly and on November 19th I was sent for.

Examination: Patient complains of pain over the 4th to 7th ribs on the right side, from about the sternum to the anterior axillary line. This pain was rendered worse by coughing and on taking deep inspiration, patient saying it felt like knives cutting about. The right side of the chest did not move with respiration excepting at the upper part, and the abdomen did not move with it either. The intercostal muscles were contracted over the painful area. The movements of the left side were normal. On auscultation there was heard pleural friction over the 5th and 6th interspaces in about two inches of their course, and the breath sounds over here were also changed; the breathing was harsher and expiration was audible. Some fine crepitations could be heard as well. Temperature 103.6°, pulse 115. The urine was darker than usual.

Treatment; After it the pain was less, the temperature 103°, pulse 110.

8 p.m. the same day. The pain is worse than this morning and there is great tenderness to touch over the 5th to 7th dorsal nerves on right side. The pleural friction is more audible, and can be felt with the fingers of the hand. Temperature 103.4°, pulse 104. The urine is darker. Treatment, after it temperature 103°, pulse 102.

November 20th, 8 a.m. Patient slept fairly well. Pleuritic friction not audible. Urine very dark and patient coughs up frothy stuff streaked with blood. Temperature 104°, pulse 102. Treatment; after it pain very much better; temperature 103.5°, pulse 102.

Evening. Has been coughing up some more red frothy stuff, but otherwise better. Has eaten a little. Respiration is partly abdominal and the pain in the side is much less. Temperature 102.2°, pulse 88.

November 21st; 8 a.m. Slept very well, very little pain. Temperature 99.2°, pulse 60. Urine clear. No cough. Treated. During the course of the day patient got up and felt pretty well, though weak.

8 p.m. Only slight pain on deep respiration. Temperature 100.2°, pulse 58. Treated.

November 22nd; Patient up all day. On deep respiration he says he still feels a little inconvenience in the right side. No fever, temperature and pulse normal. Treated once.

November 23rd: Not treated.

November 24th: From to-day onwards patient got treatment once a day, and walked to and from his

house to my house, distance 2/3 of a mile each way. No pain.

November 25th: Slight pain again to-day. It disappeared after treatment and did not return.

November 26th: Patient says he feels much stronger.

November 27th, 28th, 29th: Treated. On 29th he went back to his work (engraving) at the factory of Husqvarna and was at it 5½ hours.

November 30th: Worked at factory all day, excepting 1½ hours during which time he walked to my house, got treated, and walked back again.

December 1st and 2nd: Treated once. Says he feels quite strong. Normal. Cured.

January 1901. Has been very well ever since.

C. PHTHISIS PULMONALIS.

In Sweden pedagogical gymnastics are regarded as a specific for phthisical tendency, and not only that but as the best prophylactic measures for it that exist, because by training the respiratory power, and increasing the vital activity of the lungs, they enable the latter to resist the invasion of the bacilli.

Phthisis pulmonalis usually begins in the apices, i.e., it settles in those parts of the lungs that move least. This was the guiding fact for the pioneers of Swedish medical gymnastics. With it as a basis they built up their treatment of the condition - they specially gave movements for the lungs in order to improve their vital activity and bring into action the more immovable parts. The practice, as was afterwards shown, fully justified the theory.

The principles of Kellgren's treatment in phthisis pulmonum are the following:

I. To increase the vital activity and capacity of the lungs. This is done by attending to:

(1) The nervous elements. These can be stimulated through

(a) The dorsal spinal nerves near where they communicate with the corresponding sympathetic ganglia.

Special attention must be given to the 2nd to 4th dorsal nerves (because of the intimate connection between these and the posterior pulmonary plexus.)

(b) The intercostal nerves, which are nearly always tender.

(c) The specially affected spot in phthisis at the supero-internal angle of the scapula (page 166).

Frictions on the above nerves and tender spots should be given, and in addition shoulder hacking and back hacking, which likewise stimulate them.

(2) The muscular mechanism: There are marked defects in these. In the abdomen we know that morbid conditions cause reflex contraction of the muscles of the parietes. The same ~~condition~~ holds good for conditions of the thorax: I have mentioned this under pneumonia (page 281). The same state of affairs is present in phthisis. We have

(a) The shoulders are pulled forwards and the chest is fallen in. This must be corrected by giving respiratory and other exercises to strengthen the dorsal and cervical extensors and posterior scapular muscles.

(b) The diaphragm does not act properly. Often on inspiration there is seen a drawing in of the abdominal muscles, which themselves are hard and contracted. This must be counteracted by giving side shaking, subcostal shaking, bladder vibration (the latter is very important), stomach exercise, and making the patient practise deep respiration in positions where the abdominal muscles are relaxed, such as half-lying.

(c) The intercostal muscles are contracted; if localised this condition must be removed as described under pneumonia.

(3) Manipulations which penetrate the lungs themselves, favour expectoration, influence the circulation and stimulate the lung tissue. We have such exercises as chest clapping, thorax vibration, hacking of the back and shoulders, and of course deep respirations on the part of the patient.

II. To attend to the secondarily affected organs:

(1) The disordered stomach is improved by stomach exercise.

(2) The kidneys and bladder must be treated. The former are always tender; the latter is done for the sake of the respiratory mechanism.

III. To treat the constitution: The fever and perspiration usually diminish of themselves as improvement sets in.

C. PHTHISIS IN THE INITIAL STAGE.

Mr J.----- J.----- Hairdresser, aged 19 years, came to me on June 27th 1900.

History: Early in March 1900 he caught cold and began to have a chronic cough after that; after about two weeks a pain set in in the lower part of the thorax. In April he sought medical advice and got medicine for his chest. This did not help. He found that his cough increased and that his appetite got worse and that he was getting thinner. He also noticed that he had fever in the evening and perspired at night. Another medical man he consulted prescribed pil terebinth cum quin. He however did not derive any benefit from this and went to the hospital in Göteborg where the medical man informed him that there was danger of his lungs becoming affected, and he got a prescription containing pix, balsam styracis, quinine & opium.

Examination: Patient is thin and tubercular looking. He complains of weakness, shortness of breath, fever in the evening, perspiration at night, (This is so bad that he often has to change his clothes twice during the course of the night) and cough. The latter is most marked in the morning, when he coughs a lot of thick whitish, semi-solid lumps,

but it persists through the day and he wakes up several times in the night to cough.

No haemoptysis or hereditary tendencies.

Appetite bad and patient often vomits two hours or so after a meal; he has been doing this almost every day during the last three weeks.

Pulse, when in half lying position 122, respiration 22. The abdominal muscles are hard, contracted; they do not move with respiration. The shoulders are drawn forwards and the scapulae far apart. There is tenderness over the dorsal spinal nerves near the spine from 1st to 12th; this is more marked over the 2nd, 4th, and specially so at one spot, about ½ inch above, ½ inch internal to the upper angle of the scapula. The lower ribs are hard, and resistant.

The apices on both sides are sunk in, and there is a depression under the clavicles on both sides. Right side: dulness on percussion in the apex and in the first intercostal space; upper intrascapular and suprascapular regions, harsh vesicular breathing in these areas, with coarse crepitations in the apex and fine crepitations in the first space posteriorly. In the left side: dulness on percussion in the apex, partial dulness in the first space. Harsh vesicular breathing with fine crepitations in the apex; in the first interspace the breathing was slightly harsher

than usual and the expiration could be heard; a few fine crepitations. Rest of lungs normal. Heart normal.

Sputum, thick semi-solid masses; sink in water, Some tubercle bacilli could be found on examination on staining.

There was fever in the evening; I requested him to take his temperature twice a day and write the results down on a piece of paper and bring it to me after a fortnight; unfortunately, he lost this paper, so I cannot give the figures. Weight, 54 kilos. in ordinary clothes.

Treatment:

1. Heave lean standing chest expansion PA.
2. Forwards lying running nerve frictions, length hacking PP.
3. Half lying double arm rolling PP; flexion, extension AR.
4. Reach grasp standing double elbow flexion and extension PA, given with shoulder hacking PP.
5. Half lying chest vibration, side shaking PP.
6. Stretch half lying running nerve frictions PP. side shaking PP.
7. Heave grasp standing chest clapping PP, side shaking PP.
8. Stretch grasp standing drawing forward PP, kidney frictions PP.
9. Walk standing double arm circle carrying PA, breathing PA.
10. Half lying stomach exercise PP. I also made him practise abdominal respiration PA, and gave him bladder shaking PP.

Patient was told to be out all day and take as much exercise as he liked. No dietary precautions were enjoined.

Progress:

6th July: Vomited once, on first day of treatment, but not since. Weight 56 kilos. Says he feels stronger and can breathe easier.

12th July: He coughs less now. The sputum still sinks in water. Says he continues to get stronger. Appetite better. Weight 56k. Pulse and respiration in half lying position 110 and 22 respectively.

1st August: Weight 57 kilos. Pulse and respiration in half lying position 100 and 20 respectively.

15th August: No more fever at night, or perspiration. Coughs less. Improvement continues. Weight 58 kilos.

22nd August: Weight 58.5; hardly coughs at all.

1st September: Weight 59 kilos. Pulse and respiration 100 and 20 respectively.

7th September: Weight 59.7 kilos. Pulse and respiration 95 and 20 respectively.

15th September: Finished treatment. Weight 60.5 kilos. Pulse and respiration 85 and 18 respectively. Says he feels very well and strong. The

abdominal muscles now move properly with respiration; the shoulders are further back and he walks straighter. No cough except very little in the morning; what he coughs up is frothy.

No dulness on percussion: right lung normal. Left apex some fine crepitations without audible expiration. No tenderness over the spinal nerves. Has not vomited since June 29th; digestion very good now.

After 14 days patient resumed his usual work as hairdresser again.

Patient informed me that he always felt his cough and breathing easier when he got bladder shaking; this relieved him almost more than anything else. Next to that came spinal nerve frictions, specially the interscapular.

CHAPTER V.

DISEASES OF THE DIGESTIVE ORGANS.

No general rules can be given for the treatment of these, as of course different affections of different organs are treated in a different manner. I shall give 6 cases and describe the treatment given in each respectively.

A. ACUTE MEMBRANOUS TONSILLITIS.

K------ J------. aged 45, already under treatment for lateral sclerosis, was takin ill with the above complaint on October 16th 1899: I first saw him on October 17th at 7 o'clock in the evening. Patient had been deliriuus from 4 to 5 p.m. but was fairly clear in his head when I saw him. There was difficulty in swallowing: both tonsils were enlarged and swollen, and patches of membrane could be seen on them. The uvula was also swollen. Treatment. After it, temperature 104°, pulse 130.

18th October: Treated twice, in the morning temperature 102.6°, pulse 125. After treatment, temperature 102°, pulse 115. In the evening the temperature and pulse figures were 100.2° and 108; 99.6° and 106 respectively before and after treatment.

Morning

19th October: Swallowing easier. Temperature 100.4, pulse 112. Treated; after it, temperature 99.8°, pulse 102. Evening temperature 99.2°, pulse 98. Treated; after it, temperature 98.6°, pulse 96.

20th October: Patient got up and walked about. Swallowing much easier; no membrane left, only some redness. Treated once in the evening. Temperature 97.8°, pulse 65.

21st October: No redness. Temperature 98.6°, pulse 70. Treated once.

22nd October: Patient went out for a walk.

23rd October: Treatment stopped as regards the throat affection, as it was normal.

10th December: Throat has been quite well ever since.

Treatment: Larynx, sublingual, and tracheal vibration, nerve frictions on the nerves to these parts. General treatment for fever.

Two cases of the above are found described in Dr Arvid Kellgren's "Technic of Manual Treatment," 1890, pp.111-114.

B. ACUTE APPENDICITIS.

I believe that the only efforts, apart from those of the Kellgren school, to treat appendicitis by gymnastic measures are those of Dr A. Levin, head of the Medical Department for Women Students at the Central Gymnastic Institute. His results and experiences are published in an article written by him in Part 2 of "Tidskrift i Gymnastik" 1892 (pp.684-693) in which he himself says (p.687) that what he saw and heard during a visit to Mr Kellgren's Institute was the incentive to his trying the treatment in such conditions. Referring more particularly to Kellgren's nerve frictions and vibrations, he says (p.687) (translated): "Specially can the above named manipulations be used in many cases of illness, which usually stand quite outside the sphere of gymnastic treatment, namely acute diseases, fevers, etc. .... What I heard, in conjunction with the excellence of technic of which I saw proof and tried to acquire personally, awoke in me a determination to try a similar treatment when occasion presented itself. Specially did I think of appendicitis, which according to Kellgren has been treated by him in the

acute stage with good results."

Dr Levin gives notes of several acute cases thus treated together with some additional chronic ones. In one of the former he was assisted by Dr Arvid Kellgren, who happened to be in Stockholm at the time. He says (page 690, translated) "Dr Arvid Kellgren was good enough at my request to come up on the second day and give the treatment, which in its nature was the same that I had used, but in the method of execution it was better, as his technic is of the most perfect." The treatment in all the cases enumerated by Dr Levin gave good results both in relieving the pain and in cutting short the disease.

Modus operandi and rationale of the manual treatment for acute appendicitis.

1. We give vibrations over the appendix and the painful areas in the right iliac fossa. The effect of these will cause from the very nature of the manipulations,

(1) Diminution in the venous congestion.

(2) The mucus or muco-pus will be vibrated out into the caecum, if the opening leading into it is not blocked up. If it is, then there will be a tendency for it to become patent again.

(3) The inflammatory process will be diminished as a whole.

(4) Any localised peritonitis will be improved, and commencing adhesions will be separated in so gentle a manner that only benefit can result.

Dr Levin in the article referred to, says (pp. 687, 688)(translated) "I reasoned thus: here is of course a condition of stasis; if now one can hit upon a manipulation which on the one hand is sufficiently strong to cause a stimulation in the weakened tissues, especially the blood vessels, but on the other hand is not so powerful that by giving it one could run the risk of tearing to pieces any adhesions that possibly are present, then it cannot act otherwise than beneficially. Such a manipulation I considered that vibrations were, if they were given in so fine a manner..... that no friction or displacement should arise in the underlying structures."

2. Apart from these vibrations, we must try and diminish the tension in the abdomen generally. This is done by removing the reflex contraction of the abdominal muscles by means of vibrations over the irritated intercostal nerves and giving a stomach exercise. The latter, however, must be done very carefully and given chiefly over the transverse and descending colon. Side shaking will also have its beneficial effect.

3. We must give the constitutional treatment for fever in addition to the above.

If we get the case early before the inflammation is far gone, we can get extremely rapid results, although two days' delay may cause the cure to be delayed a week or ten days or even longer. In the following case of Mr K..... the treatment was given within 36 hours of the initial symptoms, and it is to this that I ascribe the quick recovery.

Though the Kellgren treatment which depends so much on vibrations and nerve treatment for success, has been able to do so much for acute appendicitis, the ordinary givers of massage who do not use these manipulations have, of course, signally failed, and the authors therefore have recognised this and have warned gymnasts not to attempt to treat such conditions. See Dr. Wide, "Handbook of Medical Gymnastics" 1898, page 209, who says that the giving of massage* in acute perityphilitis is in direct opposition to scientific medical gymnastics; also Dr Burn "Handbuch der Massage und Heilgymnastik" 1899, pp. 221, 222, Kleen. "Handbok i Massage" 1894, p-58, &c.

A case of appendicitis treated successfully by the manual treatment is found described in Dr Arvid Kellgren's "Die Technik der Schwedische Manuellen Behandlung," 1895, p. 132-134.

* "Massage" with him means effleurage, petrissage, massage à friction (a modified petrissage) and

Mr K..... aged 43, was on August 17th, 1898 seized with sudden pains in the abdomen, which he could not locate but felt them all over. He could assign no cause for their coming on. In a quarter of an hour or so he felt very bad and went to bed. Fever set in after a few hours (2 or 3) and the patient was able then to locate the pains to his right iliac fossa. He felt very weak and ill and sent for his medical man. The latter diagnosed appendicitis and while making his examination he palpated the right iliac region, which caused the patient much pain, etc. The medical man prescribed opium, had an ice-bag placed on the right iliac region and gave him an enema. There had been no motion since the morning of August 16th; the enema did not call forth one.

Patient slept very badly, the pains in the abdomen increased and nausea set in, though no actual vomiting. No motion. Appetite entirely gone. His medical man who was called in on August 18th said that if the temperature rose any more, he must operate. Patient did not like this idea however, and thought he would try the manual treatment; he accordingly sent to Sanna, where I was practising, on the evening of August 18th.

On arrival, patient in bed, with sunken eyes, looking/

looking very weak. Patient complained of much pain, which was of a pretty constant type, in the right iliac region and preferred to lie with his knees drawn up. He also complained of a sense of weight and oppression in the abdomen generally, and feeling of weakness and much headache. Temperature 102·4°F. pulse weak and feeble, 115.

Patient had eaten nothing all day, had drunk some water at intervals. Sense of nausea, but no actual vomiting; sometimes there was passage of gas per oesophagum and also per rectum. There had been no motion since the morning of the 16th. The abdomen looked swollen and was distended. It was resistant on palpation, and this was specially seen in the right iliac fossa, where the abdominal muscles were hard and contracted. Even slight pressure here caused a good deal of acute pain. The pain was most marked at McBurney's point. The abdomen did not move with respiration. The urine was dark and patient informed me that he had passed very little to-day.

There had been no shivering attacks. A rectal examination was not made.

Treatment: Vibrations over the painful part, given chiefly over the point of greatest pain. The latter often moved about, and the point of application of the vibrations was changed accordingly. In the course of a few minutes the pain diminished and

the patient could stretch out his legs without extra pain. After a few more minutes the contraction in the abdominal muscles grew less and the vibrations could be given harder. In addition to the above, gentle stomach exercise, side shaking, &c., head vibration and the ordinary treatment for fever was given.

After the treatment patient felt better; there was less headache and his eyes looked better. The abdomen was not so distended; this was partially due to the fact that patient had brought up much gas from his stomach and had passed a good deal of flatus per rectum. No motion however resulted. There was less contraction in the abdominal muscles, specially over the right iliac fossa and there was much less pain there. A circumscribed tumour could be felt in that region; it could not be well defined on account of the tenderness. Temperature 100.2°, pulse 93.

August 19th: Patient remained pretty comfortable until about 2 hours after the treatment, when the pain in the right iliac fossa set in again. He slept fairly well.

9 a.m. No motion yet. Patient has some headache and a good deal of pain in the right iliac fossa. However, it is not so bad as when I first saw him. He has been able to lie with his legs straight all night. Temperature 100°, pulse 100. Treated as before. The tumour is considerably smaller than last

night.

3 p.m. Temperature 102°, pulse 100. Treated.

9 p.m. Temperature 101.9°, pulse 106. Treated.

In each case the treatment almost entirely removed the pain in the right iliac fossa, the only sign being at the close of it, pain on considerable pressure. Moderate pressure caused slight pain. In the evening the urine was clearer; in the course of the day patient had passed more than yesterday.

The tumour is only a small round mass now. Patient had eaten nothing to-day; he has however drunk a little milk.

August 20th: Patient slept very well. In the morning of to-day he had a copious evil-smelling black motion.

10 a.m. There is but little pain in the right iliac fossa. Temperature 99.8°, pulse 103. Treated, as before. After it there was no pain on deep pressure, only some tenderness. Sense of resistance, but no tumour. Patient got up and sat up in a chair after the treatment. He ate some bread, and butter and milk during the course of the day.

Evening: Temperature 101.5°, pulse 108. Slight return of the pain. It disappeared after treatment. There was another motion in the evening. The urine is becoming still clearer.

August 21st: Patient up all day. Treated once in the evening. Temperature 99°, pulse 90. Appetite returning; one motion. No sense of resistance or abnormality in the right iliac region.

August 22nd: Patient feeling normal, though weak. Walked from his house to Sanna (distance ¾ mile) and got some active exercises in addition to vibrations, etc., over the abdomen, and stomach exercise. No tenderness any more in the abdomen. One motion. Urine normal.

August 23rd: Patient eat yesterday as usual, meat, vegetables, milk, etc. He did not however feel up to walking to Sanna and so was treated at home. Temperature 98°, pulse 85.

August 24th: Drove to Sanna and got treated.

August 25th - September 5th: Walked to Sanna and back daily (¾ mile each way). Treated with special treatment for abdomen and a few active strengthening movements. Motion daily since August 22nd.

September 5th: Finished treatment. Normal.

September 1900: Has been very well ever since.

C. ACUTE GASTRO INTESTINAL CATARRH.

Two cases of the above treated by Kellgren's method are to be found in "Technic of Manual Treatment" 1890, pp. 160 & 161.

Miss L..... Aged 13, was taken ill on Dec. 17th 1900: the onset was sudden, being accompanied by a rigor, fever and severe headache. About an hour afterwards patient vomited some green matter and kept on doing so at intervals. Greenish diarrhoea appeared during the course of the day, which became brown in colour after a few motions. In the evening of the same day she was delirious and this continued all night, patient sleeping very badly. During the night she vomited every hour.

December 18th: Patient vomited about once an hour during the day, and the vomit was still greenish in colour. Diarrhoea continued the whole time and there was much fever. She was again delirious in the night. On the morning of December 19th I was sent for.

Examination: Child has been vomiting green matter all night at intervals of about an hour and has had two diarrhoea motions to-day. She has been delirious all night and was so when I saw her; on being asked questions she invariably replied that

she had very much headache. She had eaten nothing since December 17th and has only had water to drink; this however has been vomited after a few minutes. Temperature 104°, pulse 138. The breathing is thoracic and laboured, abdomen very tender and continued gurgling sounds can be heard. They are greatly increased on slight pressure. Heart and lungs showed nothing abnormal.

The vomit had been thrown away and I could therefore not see a specimen.

Treatment: Head exercise, abdomen vibrations; after a few minutes I could give a gentle stomach exercise. I also gave spinal nerve frictions, kidney, spleen frictions, etc. After treatment the child became clear in her head, the pain diminished, and she was able to sit up. Headache much better, general appearance improved.

6 p.m. same day: There had been no diarrhoea or vomiting since I left this morning. Tenderness in abdomen almost gone; very little headache. Temperature 99.2°, pulse 102. Treated as before.

December 20th: Patient slept very well; appetite returning. No vomiting since last night; one soft motion. Temperature and pulse normal. Child got up and sat in a chair the greater part of the day. Treated once.

December 21st: Beyond a feeling of weakness, child feels quite well. Treated for the last time.

March 1901. No return of the symptoms.

D. ACUTE INTESTINAL CATARRH.

Mrs S....., aged 28. On August 19th she was employed the greater part of the day washing clothes and got tired. After it she lay in the damp grass to rest. In the evening she walked to a neighbouring town three miles off. She slept fairly well until about 8.30 a.m. when she was conscious of severe headache, shivering attacks, and pain in the abdomen: profuse and frequent diarrhoea came on, which was greenish in colour.

August 20th: At 11 a.m. I was sent for. Patient did not recognise me, (as she lived on the premises, she would have done so normally), and when I asked her questions, kept on telling me that she had a headache. Much perspiration; patient's head felt very hot. Temperature not taken as I had no thermometer; pulse 140. Abdomen painful and gurgling; tenderness to touch.

Treatment: Vibrations over the abdomen; head exercise, spinal nerve frictions, kidney and spleen frictions. The abdomen got less tender, and patient recognised me again. Pulse 110 after treatment.

4 p.m. Temperature 40°, pulse 108. Patient again wandering in her mind. Diarrhoea now is greenish yellow, and more frequent, often 5 or 6

times per hour. After treatment, patient recognised me and said she felt better, and went to sleep. Pulse 100.

9 p.m. Temperature 38.5°, pulse 100. Diarrhoea not quite so often, 3 or 4 times an hour between 4 and 6 p.m., then only about twice an hour. Treated, after it, temperature 38.2°, pulse 85.

August 21st: Slept badly; diarrhoea during the night about six times; greenish brown.

11 a.m. No headache, but very tired. Temperature 36.5°, pulse 74. Treatment.

Evening, 8 p.m. Patient had had no diarrhoea from 9 a.m. till 12 noon; then 5 or 6 times between 12 and 3. Then no more, and after 3 o'clock she had been able to sit up and read the newspaper. Temperature 37o, pulse 65. Treatment. After it patient ate some bread and butter and milk for supper.

The treatment in the acute stage (Aug.20th - 21st) was the same as the first time it was given, a gentle stomach exercise being added the second and subsequent times.

August 22nd: Slept well; ate breakfast this morning as usual. No motion since 3 p.m. yesterday. Says she feels quite well though weak. Treated once with a few active exercises, general nerve treatment, stomach exercise, etc.

August 23rd: Two normal motions to-day. Treated once in the morning. Says appetite is normal and that she feels quite well and strong. Treatment finished.

December 20th, 1900: She is keeping very well indeed. March 1901. Ditto.

E. CHRONIC APPENDICITIS.

Mr W....., aged 22, came to Sanna on August 27th, 1900, on the advice of Dr Engstrand, to undergo the manual treatment in order to get cured of chronic appendicitis.

The history was as follows: Early in 1899 he had his first attack of appendicitis. His medical man prescribed morphia, rest in bed and strict dietary precautions. The patient got over the attack rather quickly, remaining in bed only 8 days; but after it on first getting up he felt very weak. He never felt properly well and had a relapse in July of the same year, which attack was about as bad as the first. He then had another relapse in November, and a third in the middle of December. Each of these attacks lasted about 8 days, the treatment being the same as before. On 26th December he took massage

and medical gymnastics (Ling's system) for a month, but got three relapses during that time. He decided to stop the gymnastic treatment after that, as he thought it was doing him harm.

All this time he was never free from a pain in the right iliac fossa, which was aggravated after every meal, and he suffered chronically from constipation. He had become thin since the first attack.

He remained pretty much in the same condition until August 10th, 1900, when he had another relapse, which however was not so bad as usual and he was only four days in bed.

On August 26th, Dr Engstrand recommended the patient to try the manual treatment.

Examination: Patient is thin, pale and feeble looking. He complains of continually having pain in the right iliac fossa, which gets worse after meals. His appetite is bad and he is constipated, a motion coming on an average only every three days. There is considerable tenderness in the right iliac fossa and pressure there causes pain. The vermiform appendix, about the thickness of one's thumb, can be plainly felt. Patient sleeps badly and is somewhat depressed.

Treatment:

(1) Half lying appendix region vibration, &c. P.P.

(2) Side spann standing drawing forwards P.P., kidney frictions, P.P.

(3) Side lying leg abduction, A.R. abduction P.R.

(4) Sitting trunk extension and flexion P.A.

(5) Stretch stride standing bending forward, P.A.

(6) Forwards lying running nerve frictions, length hacking, P.P.

(7) Stretch spann standing drawing forwards P.P. frictions over the abdominal intercostal nerves, P.P.

(8) Heave grasp standing, chest expansion P.A.

(9) Ride sitting alternate rotation, A.R. ringing P.P.

(10) Half lying stomach exercise P.P.

Progress: August 30th: Less pain in the right iliac fossa.

September 7th: Patient has been worse and better alternately the last 8 days. To-day however he feels considerably better. There has been a motion every day since September 1st.

September 10th: Hardly any pain in the right iliac fossa. Patient says he feels stronger.

September 26th: Patient was obliged to stop the treatment to-day. The general condition is better; patient feels stronger; sleeps better. His appetite is better. There is a motion every day. There is no tenderness over the right iliac fossa and the thickened vermiform appendix has quite

disappeared. That region of the abdomen is apparently quite normal.

On October 13th, in reply to a letter of mine, patient wrote, "I find myself in very good health, and the pains in my abdomen with which I was specially troubled are now quite insignificant. However, the last few days I have been troubled with diarrhoea from which I have quite recovered. On the whole I feel very well and strong."

F. CONSTIPATION.

The general scheme for the treatment of this is as follows:

1. To improve the laxness of the abdominal walls. Those are nearly always found to be flabby and weak. By toning them up, we brace up the abdomen as it were; thus we promote the circulation and tend to reduce the size of any dilated portions of intestine.

Intercostal nerve frictions are given as a method of stimulation of the abdominal muscles and reflexly to stimulate the abdominal contents, and various exercises, such as sitting trunk extension and flexion P.A., &c. to strengthen the former still more.

2. To improve the circulation in the abdomen and body generally by suitable exercises.

3. Direct manipulation on the abdomen and its various organs. We have stomach exercise which should be given energetically; frictions on the liver with its corresponding dorsal nerves (6th and 7th) should be included. The liver is of course in addition stimulated by the fact that the various active exercises we give cause increase in the glycogenic function.

We also stimulate the nervous elements of the abdomen by means of sacral beating, intercostal nerve frictions (as mentioned), frictions over the dorsal nerves where they communicate with the splanchnics, etc. over the ganglion impar, solar plexus, &c.

4. To tone up the constitution as a whole by running nerve frictions, removing headache, &c.

As the great point of the treatment is to strengthen up the intestine, so that it can act normally without enema or medicine, all taking of the latter must be stopped. It does not matter if no normal motion comes for a fortnight; this will be compensated for by the fact that when it does take place it shows that the intestine is regaining its vital activity; the motion after that will come soon

enough and so on, and no bad effects will result.

The results are usually very satisfactory. I only give two cases to illustrate them, as accounts of many others successfully treated by the above method, are to be found in Dr Theodore Möller's "Zur Therapie der Habituellen Obstipation." 1898.

Case 1. (From notes taken by myself and Dr A. Moller).

Miss P..... , aged 35, had been suffering from chronic constipation since 1881, occasionally getting better for a few months, but after that becoming worse again. When patient came to me on November 15th, 1899, she informed me that she had been taking pills pretty constantly during the last 11 years and had perpetually to resort to enemas, etc. She had had no motion for several days and lately often 8 days elapsed without one. She likewise complained of severe headache, and was nervous and depressed.

The treatment was as follows:--

(1) Reach grasp standing knee flexion and extension P.A. sacral beating, P.P.

(2) Stretch grasp standing drawing forwards P.P., abdominal intercostal nerve frictions, P.P.

(3) Stretch stride standing bending forward P.A.

(4) Sitting trunk extension, flexion P.A.

(5) Forwards lying running nerve frictions, P.P. length hacking, P.P.

(6) Sitting head exercise, P.P.

(7) Loin lean stride standing alternate rotation A.R. ringing P.P.

(8) Stretch half lying running nerve friction, P.P., side shaking P.P.

(9) Half lying leg rolling, P.P. flexion P.A., extension A.R.

(10) Half lying stomach exercise, including frictions given on the ganglion impar.

Patient was told that she must stop all medicines and enemata, &c.

Progress: November 17th: Headache disappeared to-day and did not return during the month she stayed under treatment.

November 20th: Normal motion. November 22nd, motion. After that she had a motion almost every day until November 28th. Then none until November 30th during menstruation. After that daily until December 15th. Treatment stopped, patient feeling very well.

She remained so until the middle of January 1900, when she gradually got constipated again and her headaches returned.

She came back to me on May 14th, 1900, and the treatment was resumed, the gymnastic prescription being practically the same as before. She had not had a motion for 5 days, but had one after the first day of treatment. Her Headache disappeared after it

and did not return. Motion on May 16th. She stopped with me until June 20th and had a motion daily from May 16th until then with only two exceptions, May 24th and June 5th.

September, 1900: I hear that the patient is keeping quite well and has a motion daily.

In this patient I made the observation that friction on the ganglion impar produced no sensation when she first came; as improvement took place, this sensation returned, and after about 3 weeks, she began to feel a kind of sparkling feeling throughout her abdomen when the frictions were given.

Case 2. G..... Å....., aged 9, had been constipated practically since birth. Temporary improvement took place when he came under treatment for facial paralysis two years ago, but after it he relapsed again to his former condition. Often 3 days would pass without an evacuation, upon which his mother would give him an enema, which would produce the desired effect. He does not suffer from any special symptoms in consequence of this, although he is thin, small and rather undersized for his age.

The treatment for his condition was given daily from June 23rd to July 31st 1900; the constipation entirely disappeared, a rectal evacuation taking place

daily during the last fortnight of this period. In December 1900 his bowels were still acting regularly.

The treatment was on the lines indicated.

CHAPTER VI.

HEART DISEASES.

The following are the theoretical and practical points on which the manual treatment of heart disease is based:

We have to

I. Relieve the heart of its work. This is done by

1. Furthering the circulation, both arterial and venous, and thereby diminishing the peripheral resistance in the capillaries, in the lesser and greater circulations.

2. Drawing blood to the more peripheral parts.

3. Local manipulations over the heart.

II. Tone up the constitution as a whole:

Let me consider these in detail from a practical point of view.

I. Under this heading we have to take up the effects of

1. Passive movements at joints.
2. Active movements.
3. Respiratory movements.
4. Stomach exercise.
5. Manipulations over the heart itself.

1. Passive movements at joints: I have shewn that these cause improvement in the circulation by

promoting both the arterial and the venous flow, which brings with it diminution in the resistance in the capillaries, and likewise if given energetically through a large radius, cause an increase in the amount of blood in the region exercised, i.e. blood is drawn to the peripheral parts.

Passive flexions and extensions do not produce so wide spread an effect as rollings, because the former chiefly influence the flexor and extensor surfaces of the part exercised; the latter, however, include the lateral aspects as well.

Professor Lovén, in Vår Tids Forskning No. 17 says (P. 22, translated): "In most of the joints of the body, but specially in the hip and shoulder-joints, and in the lower part of the neck, the outer-most layer of the walls of the veins are usually attached to tendon sheaths and fasciae, which are stretched in certain movements, in consequence of which the veins are dilated. By means of suitable exercises the suction power which results therefrom can work powerfully to promote the circulation."

No exercises stretch and relax the surrounding parts of joints more thoroughly than rollings, and thus these are the most powerful circulatory furthering movements we have, specially as the most perfect mechanism of attachment, as mentioned above, is found

in the shoulder and hip joints where circumductions are permitted.

The effect of "ringing" on the abdominal circulation and by rolling on that of the lower extremities has already been referred to.

2. Active Movements: We usually give duplicate movements instead of purely active ones, because thereby a greater effect is obtained in the muscles we exercise. Duplicate movements in most cases throw but very little more strain on the heart than the corresponding purely active ones, because although in the former we have much greater muscle contraction in the parts exercised, we have by our fixation eliminated many other muscles which would have to act if thelatter were done. There is, however, a great tendency on the part of the patient to hold his breath while doing the exercise and it is this that tends to cause any extra strain on the heart. This inhibition of respiration must of course on no account be allowed.

The effects of duplicate movements in furthering the circulation, diminishing the peripheral resistance, bringing more blood to the exercised parts and thus drawing it away from the heart, have been fully considered already (pages 488). Concerning the abdominal circulation, I have also spoken of

the effect that duplicate rotations, etc. have on it.

Besides the above effects, both the passive and duplicate movements aid in the lymph flow, which they promote.

It is quite a mistake to suppose that heart disease patients cannot perform purely active and duplicate movements without risk; the vast majority, excepting in the last stages, benefit by doing them. The idea that these should not be done has no doubt arisen from the fact that in ordinary life patients do not systematically do movements that are in physiological harmony with the requirements of the case, and thus no improvement, or a change for the worse , takes place.

Prof. Hartelius, in "Lärobok i Sjukgymnastik" 1892, p.200, says: "Even active exercises can be performed from initial positions of rest by persons suffering from cardiac disease without the heart's action being too much excited. If the strength of the exercises is carefully adjusted, the pulse becomes fuller and more regular, but not quicker.

" In practice therefore, we should remember that the gymnastic treatment of heart disease should not be exclusively restricted to passive movements, but that even active ones can be used if they are applied with discretion and proper caution. Practical at-

tempts have likewise demonstrated that gymnastic treatment is not merely indicated in comparatively mild cases of heart disease, but that various passive movements can procure relief even in most advanced ones."

As an example of the latter, he quotes the case of a woman aged 38 with mitral stenosis and incompetence; "The cardiac action was very weak, the patient suffered from considerable dyspnoea and tormenting palpitation; there was a considerable subcutaneous exudation in the lower extremities, and the same condition was present in the peritoneum; the appearance was cyanotic." Marked improvement resulted in this case from gymnastic treatment.

3. Respiratory Movements: The beneficial effects of these on both the greater and lesser circulations has already been given, see pages 137,138. I must however here mention some points which I did not enter into at that juncture.

"Prof. Loven, in "On the Blood", says that in order to facilitate the movements of the blood current in the veins (which from the existence of the valves must be regarded as essentially a pumping apparatus) there is at most of the joints, but especially where the extremities are connected with the trunk, viz. at the inguinal region, the shoulders

and the lower part of the neck (where the fasciae are expanded over large veins) a mechanism by which the walls of the veins are drawn apart and a suction produced by inspiration. A similar mechanism for accelerating the blood current is to be found in the passage of the vena cava through the foramen quadrilaterum of the diaphragm to the edges of which the vein is attached." (Translated and quoted by Prof. Georgei in "Kinetic Jottings," 1880, p.60.)

In many cases of heart disease one finds that respiration is shallow, the shoulders are too far forward and often the abdominal muscles are hard and tense, and either do not work at all with inspiration, or are even drawn in with it. This must be corrected if met with in such cases; trunk movements entailing strain on the anterior abdominal muscles should be omitted or only done while deep abdominal respiration is practised.

The nutrition of the heart itself is improved by the aids to circulation, which brings with it quieting of the cardiac action. Better respiration entails more oxygenated blood in the body and therefore the amount in the coronary arteries is increased. "A shortening of the diastolic period lessens the nutritive supply to the heart. Similarly diastolic distension of the left heart by back pressure lessens the coronary flow. These are facts of great pathol-

ogical importance." Prof. Schäfer, "Textbook of Physiology," Vol.II. 1900, p.166.

In prescribing gymnastic movements for heart disease in addition to special respiratory movements, we should give a short one after each exercise, say double arm circle carrying (see page 124) done once or twice.

4. The effects of stomach exercise on the circulation: This has been referred to already (pages 221 & 222). We have:

1. Furthering of the circulation in the abdomen, both in the portal vein and the inferior vena cava, with consequent diminution in the peripheral resistance.
2. Drawing of blood to the abdominal organs.
3. Reflex quieting of the heart's action.
4. Diminution in reflex contraction of the abdominal muscles, if such exists.

5. Manipulations over the heart itself:

1. Heart Shaking.
2. Heart vibration.

These have been described with the effect they produce, (page 196).

3. Clapping over the heart. This manipulation is not given by itself, but as a part of chest clapping.
4. Side shaking. This has a quieting action on the heart. (page 193-4)
5. I may here refer to the manipulations on the nervous elements of the heart. Vibrations

or frictions over the 4th and 5th dorsal nerves of the left side near the spots where they communicate with the sympathetic ganglia should be given in cases of heart disease. These nerves are usually found to be tender, and frictions over them in many cases, cause the heart's action to become stronger and slower.

Frictions over the vagus nerve used formerly to be given by Swedish gymnasts. I do not think they are given much now; personally I have never had occasion to use them.

II. To Tone up the Constitution as a whole:

This is done partly by the passive flexions, rollings, the purely active and duplicate movements, the respiratory exercises and the stomach exercise. In addition we stimulate the cerebro-spinal system as a whole by means of such exercises as forwards lying running nerve frictions PP, etc., and we may with benefit give stimulatory tractions PP. etc.

I must here mention that the spleen in some cases of heart disease is tender, even in those cases where no sign of backward pressure in the cavae or portal system exist. Giving spleen frictions or vibrations and nerve treatment over the 10th left dorsal nerve, as described already, will often relieve the patient and in one case I noticed that the pulse rate sank from 5-8 beats per second more at the conclusion of the daily gymnastic treatment, if this spleen treatment was included, than if it was omitted.

Neither Ling's nor Kellgren's name is ever found mentioned in textbooks associated with gymnastic treatment for heart disease, although one frequently finds reference to two others, viz.

1. Oertel's Treatment,
2. Schott's "

about which I now intend speaking a little.

Oertel's treatment consists in the giving of graduated exercises combined with a kind of "artificial respiration" exercise. This method in many cases does good, but not in all. The number of movements is limited and it has this serious drawback that it cannot be given to patients who are confined to bed. For mild cases,however, it in many cases is useful.

Schott's treatment. Most of the profession in England have heard of this, and regard it as deserving a prominent place in the therapeutics of cardiac disease. Why this should be so, I do not understand. Schott's treatment may be briefly described as a parody on Ling's system.

Not only has Schott nothing new to offer, but the exercises he uses are the most elementary of the Swedish ones (Ling's system) which are performed without due regard to respiration and initial position; there are no special respiratory movements; Schott arrogates to himself and his brother, whose successor he acknowledge himself to be - the "invention" of the

treatment. He has no right whatever to be considered as the initiation of exercises for heart diseases. Under these circumstances one cannot but wonder why he has been considered as such, and why his inferior methods have been thought so excellent and better ones ignored.

M I T R A L I N C O M P E T E N C E.

J..... H..... aged 18, came to me on July 20th, 1900. History: four years ago he had rather a bad attack of rheumatic fever which affected his heart. He was informed when he was well as regards the arthritic condition that he had heart disease. He was able however to be up and to work in Huskvarna factory at lathe work. He went to many medical men about his heart and got from time to time various medicines, which however did not do him any good. About November 1899 he began to feel worse and suffered from want of breath and breathlessness on exertion; some cough set in. At Easter 1900 he was compelled to stop work at the factory.

Examination: Patient looks weak and thin. The lips are somewhat cyanosed. He complains of a sense of oppression in the cardiac region and a continual feeling of uneasiness there; also of attacks of palpitation. He likewise coughs a good deal, bringing up frothy stuff. He sleeps fairly well. There

There is some breathlessness, and on slight exertion this becomes much worse; he is unable to walk quickly; even walking fairly slowly brings this on.

Inspection: The 4th, 5th and 6th ribs are prominent and hypertrophied for about two inches in their course over the area where the apex beat is to be seen and felt. There is a heaving impulse in the 4th, 5th and 6th interspaces, and the apex beat is located to the 5th space, one inch external to the nipple line. On palpation a thrill is felt over this area coincident with the apex beat. Percussion showed enlargement of the heart on the right side (as fig. 228). Auscultation; there is a loud blowing murmur in the mitral area, replacing the first sound, which is propogated round into the axilla; the second sound is clear in this area. There is marked accentuation of the second sound in the pulmonary area. The aortic and tricuspid sounds are clear.

Pulse, 120 per minute, fairly regular, See sphygmographic tracing, No.1, p. 341. taken before treatment.

Respiration: This was not normal. The lower ribs as tested by giving side shaking, were hard and resistant and inelastic. The abdominal muscles were hard and did not move with respiration; on asking patient to make a deep inspiration, the upper

part of the thorax moved most, whereas the abdominal muscles were drawn in.

Appetite not good. Motion daily. Urine normal.

Treatment:

In this case I counted the pulse before and after it. I proceeded as follows:-- I requested the patient to come a little earlier than the time appointed for treatment, and to sit down and keep quiet until I was ready. I then put him in half-lying position, waited two minuted for the pulse to become regular and quiet again, and then counted it. The gymnastic treatment was then given, as follows:

1. Half lying double arm rolling, P.P. flexion and extension A.R.
2. Forwards lying, running nerve frictions and length hacking, P.P.
3. Half lying, double foot rolling, P.P. flexion and extension, A.R.
4. Heave grasp standing, chest clapping, side shaking, P.P.
5. Sit lying, knee flexion and extension, P.P., extension, A.R., flexion P.R.
6. Loin lean stride standing alternate rotation A.R., ringing P.P.
7. Half lying double leg rolling, P.P., flexion P.A. extension A.R.
8. Half lying heart shaking, P.P.
9. Walk standing double arm circle carrying breathing P.A. (This was given at intervals, several times during the course of the gymnastic treatment.)
10. Half lying stomach exercise.

I then counted the pulse again.

Progress: The pulse rate was as follows:--

	Before:	After.
July 21st:	120	102
" 23rd:	120	100
" 24th:	125	97
" 25th:	120	90
" 26th:	110	90
" 27th:	102	86
" 28th:	100	85
" 30th:	95	85
August 1st:	102	84
" 2nd:	88	84
" 3rd:	96	88
" 4th:	100	90
" 5th:	100	90
" 6th:	100	90
" 8th:	98	84
" 9th:	98	88
" 11th:	87	81
" 14th:	81	76
" 20th:	82	78
" 24th:	80	76
" 30th:	80	74
September 4th:	81	76
" 8th:	80	72
" 10th:	80	72
" 14th:	80	72.

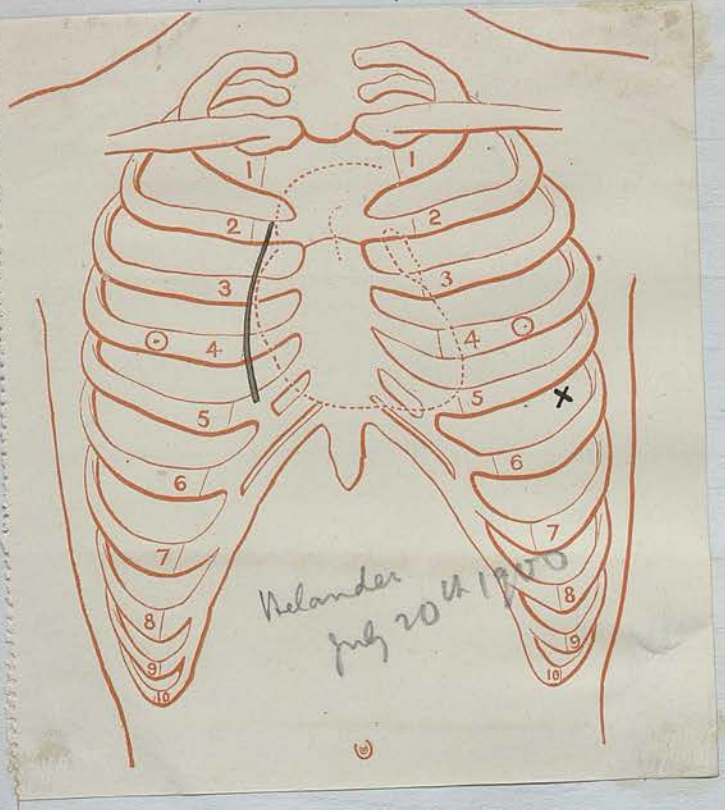


Fig 228.

× , 1 inch to left
of nipple line

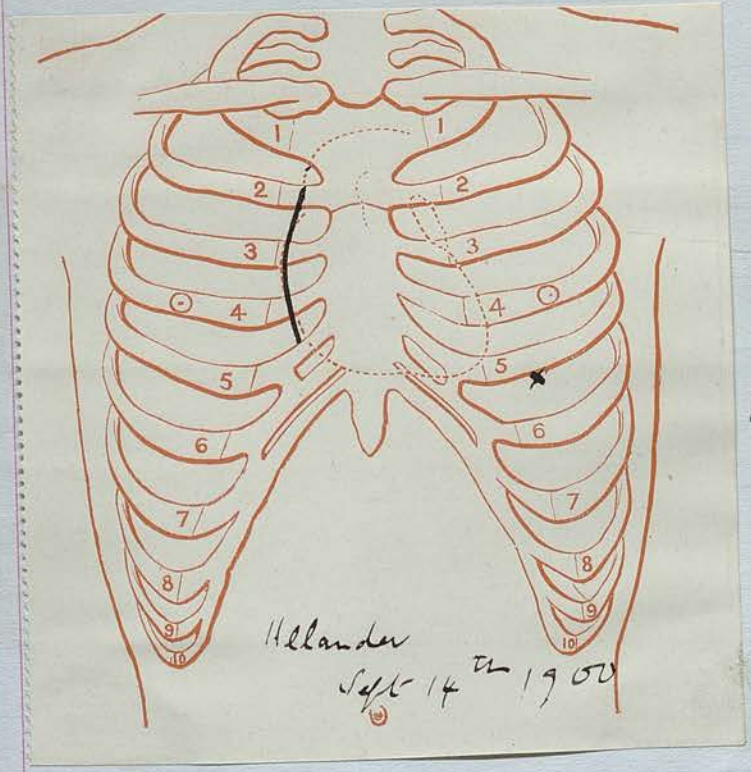
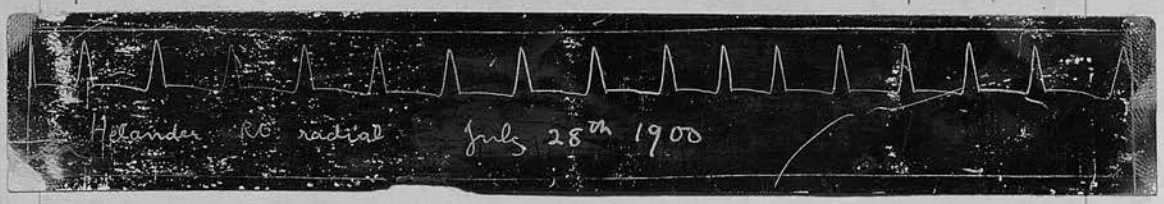


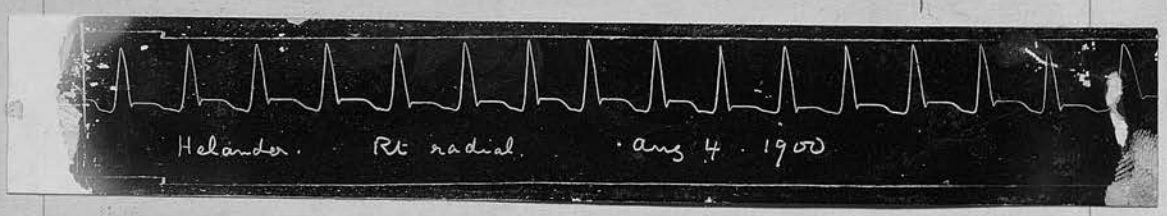
Fig 229.

× ½ inch to right
of nipple line

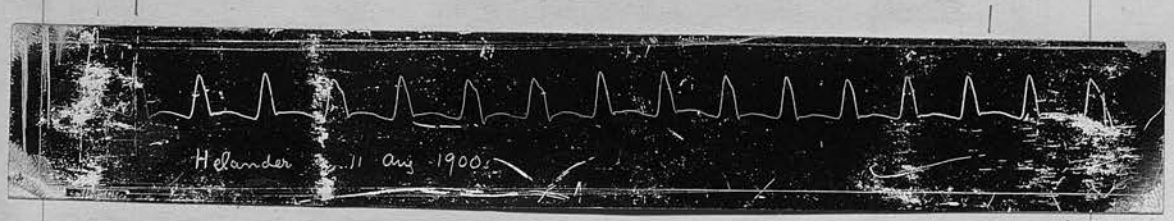
A



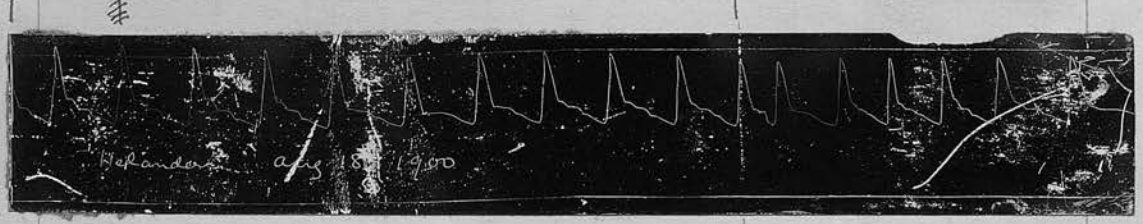
B



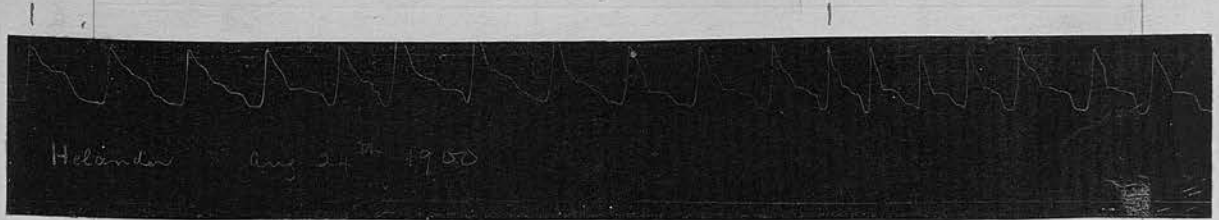
C



D

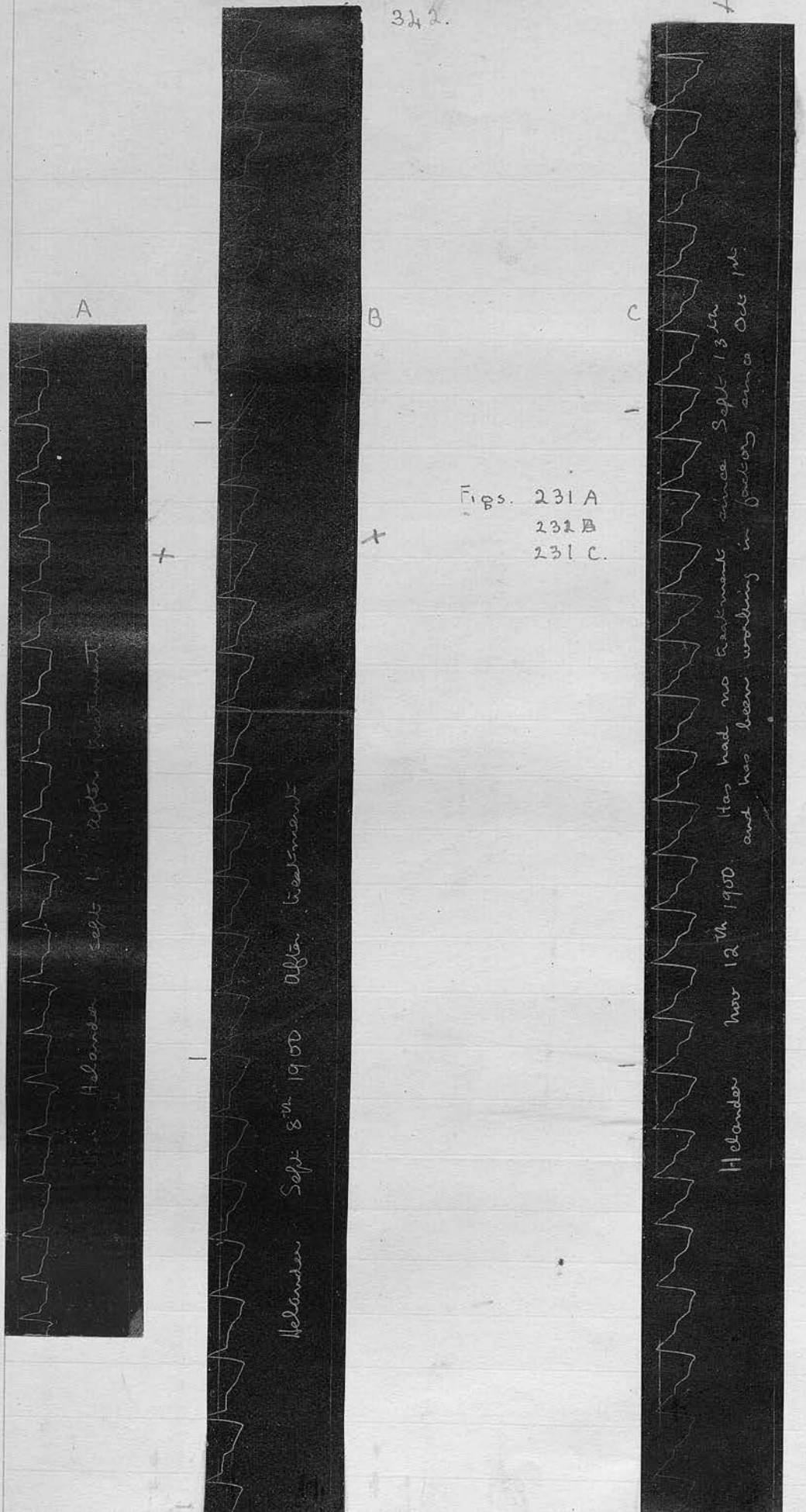


E



F

Figs 230, A, B, C, D, E, F



Figs. 231 A
231 B
231 C.

September 14th: Patient finished treatment to-day. He is much better as regards the subjective symptoms. He can walk quicker without any breathlessness ensuing, and slight exertion causes none. He feels stronger and says he sleeps better, and eats better. There is hardly any cough now. There is no anxious feeling and no oppressive sensations in the cardiac region. The lips are not cyanosed any more.

Objective: The abdominal muscles move with respiration, and are much less hard and tense. The lower ribs move more with respiration and are more elastic. The apex beat is as in fig. 229 and is limited to the 5th interspace. Percussion shows less dullness to the right of the sternum than when he first came. (fig. 229) The murmurs are as before though now not so loud. There is accentuation of the 2nd sound in the pulmonary area.

Various sphygmographic curves taken weakly are drawn on pages 341 & 342.

Patient resumed work (lathe work) on October 1st. On November 12th I saw him again. He is feeling very well and no unpleasant symptoms have arisen. The heart dulness and sounds are as before; pulse when sitting down 82. Sphygmographic tracing is shown on page. 342.

I saw patient again on March 1st 1901. He says he feels even better than when I last saw him; he is stronger and can work better. No unpleasant symptoms have returned.

The size of the heart is about the same as in figure 229 , the apex beat being about ½ inch from the nipple line. The murmur in the mitral area is not so loud as it was, there is hardly any accentuation of the pulmonary second sound. Pulse when sitting down 72 per minute.

Patient has been working steadily since October 1st 1900, and has felt quite well all the time.

Sphygmographic tracing herewith (fig 232)

Fig. 232.

MITRAL STENOSIS & INCOMPETENCE.

Case II.

H..... T....., aged 13, was seized with an attack of rheumatic fever in November 1899 and was in bed one month. In May, 1900, he had another attack and was at the hospital where the diagnosis of acute articular rheumatism and mitral incompetence was given. He remained at the hospital until the middle of June and then went to a summer health resort. He was however not free from rheumatic pains, and in August went through an attack of pleurisy; he got over the latter all right, but after it there were continual rheumatic pains, tendency to fever and general weakness.

I first saw patient on October 1st, 1900 . He looks weak, lips somewhat cyanosed. He complains of continual pains in his ankle joints and kneejoints sometimes, wrists and finger joints. These could be seen to be swollen and were very tender. There is breathlessness on exertion and difficulty in walking, the latter however, is due partly to the pain in the ankles and knees. Patient however feels nothing unusual in his cardiac region and does not notice the peculiarities in the cardiac action (intermittence).

The apex beat can be seen in the 4th interspace ¾ inch external to the nipple line. Percussion of the right border shows enlargement laterally (see fig. 233) There is a presystolic murmur in the mitral area and the first sound in the mitral area is replaced by a blowing murmur which is propogated into the axilla. The aortic and tricuspid sounds are clear; there is accentuation of the 2nd sound in the pulmonary area.

Pulse rapid, about 120, intermittent. The greatest number of intermittencies I ever counted was 15 per minute, though as a rule they averaged from 5 to 10. Sphygmographic tracing is shown beneath. (p. 350.)

Great tenderness over the 4th, 5th dorsal nerves posteriorly.

No signs of the pleurisy remaining.

Temperature 37.2°

Treatment:

1. Heave grasp standing, chest expansion PA, heart shaking PP. given together with frictions on the 4th and 5th left dorsal nerves near the spine.

2. Heave sitting double forearm extension and flexion AR.

3. Forwards lying, running nerve frictions, length hacking, PP.

4. Side lying running nerve frictions, kidney frictions PP.

5. Lying double leg flexion PA, abduction AR, adduction PR.

6. Ride sitting alternate rotation AR, ringing PP.

7. Stretch stride standing bending forwards, P.A.

8. Sitting hand, finger rolling P.P. flexion and extension A.R., joint kneading. PP.

9. Half lying stomach exercise. P.P.

Progress:

The fever ranged from 37.2° to 38.3° for a few days; then the temperature became normal and did not rise again. After October 15th it never went above 37.5° in the evening.

October 3rd: 15 intermissions in the pulse in 5 minutes.

October 6th: Hand and finger joints less swollen. Three intermissions in ten seconds, then none for 1 minute, 40 seconds.

October 10th: No intermission in 1½ minutes.

October 12th: No intermission in 2 minutes.

October 16th: Pulse commencing to be slower. No rheumatic pains in fingers, hands or ankles.

October 19th: Pulse rate went up again somewhat.

October 28th: Went for a walk of three hours. Fingers, wrists and ankles not swollen since October 16th (and did not get so either by the time he left.)

November 3rd: Pulse below 100 per minute for the first time since October 1st.

November 7th: Went for a tour through a neigh-

bouring factory and was on his feet for three hours.

November 9th:to 13th: No intermission in five minutes.

November 14th: One intermission to-day as shown in the sphygmographic wave.

November 14th to 17th: No intermission in five minutes.

November 18th: Treatment finished.

For the pulse rates see page 352. Sphygmographic curves were taken on October 1st, 8th, 13th, 18th, November 1st, 10th, 14th, 17th. See pages 350 & 351.

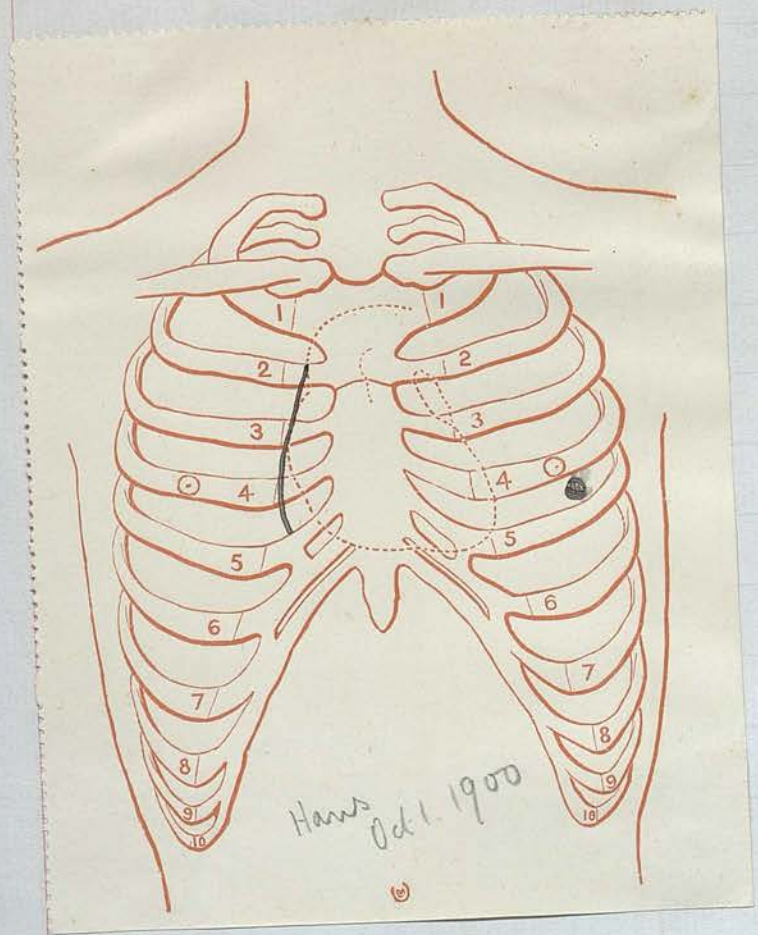


Fig. 233.

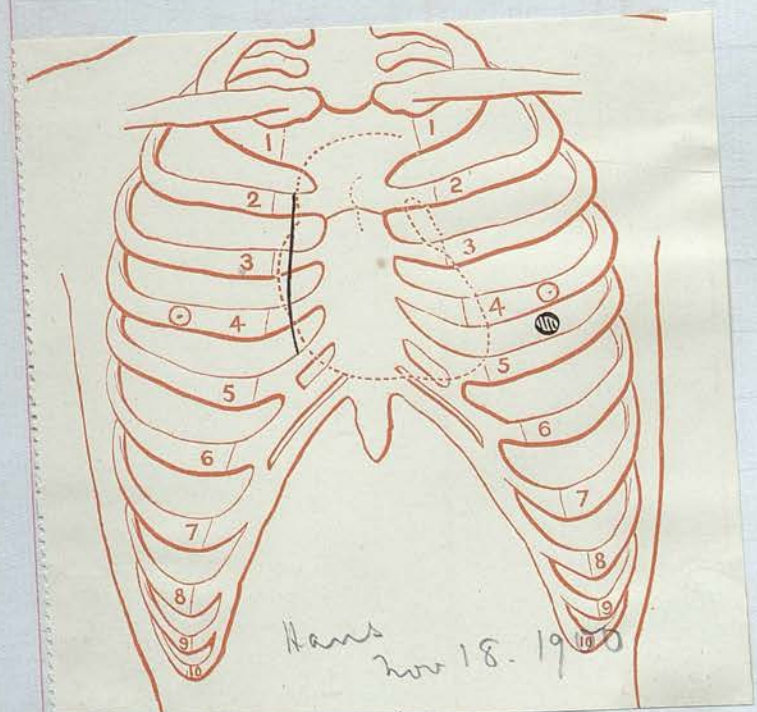


Fig. 236

Fig. 234 A B C D E

Hans Shelander Nov 15th 1950 after treatment
Hans Shelander Nov 14th hour 1950 after treatment
Hans Shelander Nov 17th 1950 after treatment

Figs. 235 A.
B.
C.

Pulse Rate,	Takes after Treatment.
October 1st:	120
2nd	115
3rd	118
5th	114
8th	115
10th	118
12th	115
15th	110
16th	102
17th	102
18th	103
19th	110
22nd	111
23rd	104
24th	110
25th	110
27th	110
29th	108
31st	110
November 1st	101
2nd	102
3rd	98
5th	102
6th	98
7th	96
8th	92
12th	92
14th	94
16th	96
18th	86

The pulse as taken in the evening from 12th to 18th November averaged from 95 to 90.

CHAPTER VII.

DISEASES OF THE BLOOD AND LYMPHATICS.

A. CHLOROSIS

This condition has long been considered amenable to gymnastic treatment by the practisers of Ling's system. (Vide Prof.Hartelius, "Lärobok i Sjukgymnastik," 1882, p.140, and elsewhere.)

The manual treatment has the following for its basis.

(1) Movements to aid the digestion, which is usually impaired, and to relieve the constipation which is so often present.

(2) Movements at joints to further the circulation of blood and lymph and thus bring more nutritive matter for assimilation, and to lighten the work of the heart.

(3) Stimulatory nerve treatment of the body generally.

(4) To give respiratory movements to develop that function and thus bring more oxygen to the body.

In case of great anaemia of the head, stimulation of the abdominal sympathetic will send blood there.

Case from notes taken by myself & Dr. A. Möller.

Miss G..... A....., aged 15, domestic servant, came under treatment on November 14th 1899. Her history was as follows:- In the autumn of 1898 she began to feel weak and tired and looked pale. Her medical man diagnosed chlorosis and prescribed iron. No improvement resulted. In the spring of 1899 the condition was aggravated and she suffered from headache, breathlessness on slight exertion and was constantly tired. In spite of this, from pecuniary considerations, she accepted a situation as servant; but got so much worse that she had to come home and arrived there in a semi-collapsed condition. Menstruation commenced two years ago, but has been in abeyance, sometimes two months elapsing; there had been none for the last two months.

The condition of the patient on November 14th was one of great weakness; she was in bed and looked very greenish yellow. The lips were very pale and even such slight exertion as moving an arm or leg was followed by breathlessness. There was a well defined mitral systolic murmur and a <u>brüit du diable</u>. No cardiac enlargement.

After three days of treatment at home she was much better and on the 4th day walked to my house for treatment, a distance of about 300 yards. She was

however still very feeble. She progressed steadily until November 27th when a slight relapse occurred and she was again treated at home that day. On the 28th she again was able to come to me. Her headache left, her colour became normal, she grew strong and her menstruation returned normal in amount and regular. On January 18th she finished treatment and was quite restored. She was able to do active work and in March got a temporary situation as nurse for a baby. In December 1900 I saw her and she is in splendid health.

The treatment at first consisted chiefly of a few passive movements, including stomach exercise. In the course of time new ones were added and finally the gymnastic prescription was as follows:--

1. Half lying double arm rolling P.P., flexion and extension, A.R.
2. Stretch half lying, running nerve frictions PP. side shaking PP.
3. Heave grasp standing chest clapping, side shaking PP.
4. Half lying double foot rolling PP., flexion and extension AR.
5. Stretch grasp standing drawing forwards PP. kidney frictions PP.
6. Forwards lying, running nerve frictions, length hacking PP.
7. Stretch stride standing bending forwards PA.
8. Sitting trunk extension and flexion PA.

9. Half lying double leg rolling PP, flexion PA., extension AR.

10. Half lying stomach exercise, etc., PP.

I can remember at least a dozen cases of chlorosis and anaemia, some very severe, in my practice since 1898. All were cured, and in all cases where I saw the patient some time afterwards (at intervals from a few months to a year or more) or received letters from them, the cure appeared to be permanent.

B. LYMPHANGITIS.

Under this heading I shall discuss the treatment of commencing blood poisoning of the extremities in consequence of wounds, abrasions of the skin, etc.

The pathology of the condition is: there is an infective process starting from a wound or scratch, (quite trivial in many cases); inflammation in the lymphatic vessels results from absorption of the morbid products, with a tendency to spread upwards.

The treatment of the condition is local and constitutional. Locally we give running vibrations and frictions, etc., centrifugally, in order to prevent the spread upwards of the condition, and to try and get the infective products to pass back the way they

came. It is here that we have one of the great exceptions to the fact that all running vibrations, strokings, etc., should be given centripetally. To apply such measures in the direction of the venous and lymph flow would of course result in great aggravation of the condition -- all the books on massage refer to this and give such infective conditions as contraindicating that treatment.

The constitutional treatment is to tone up the body as a whole and to promote elimination of the toxins that have already been absorbed.

I append four cases treated by the above method. No antiseptics were used in any of them.

Case 1.

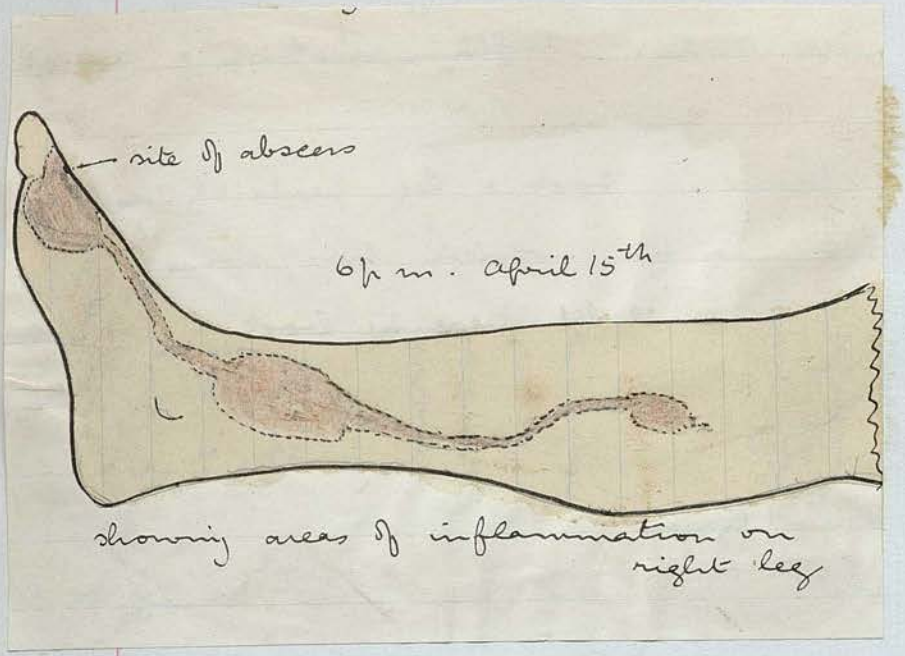
Name: E..... L....., Age: 13.

History: All the winter patient had a sore place on the distal anterior surface of the first metatarsal bone, caused by wearing tight shoes. On the evening of the 13th April she felt pain there; during the night ensuing she slept badly and was worse in the course of the day. At 6 p.m. on the 15th her mother sent to Sanna.

Examination: Patient complained of much pain in the big toe and over various points on the inside of the right calf. She could hardly walk at all on

account of the pain and even when keeping the foot and leg still there was considerable pain. Great toe had a fluctuating swelling about over the distal end of the first metatarsal of the right side; red swelling round about all across the foot, over the distal halves of the metatarsals, and red patches and lines up the inner side of the calf (see fig. 237) Inguinal glands swollen. All the swollen parts very tender. Pulse 92. Swelling of the foot. There was some fever. Other organs of the body were healthy.

Fig. 237.



Treatment: Vibrations over the abscess which caused the extrusion of a little pus and serum; vibrations from inflamed areas down to abscess. Vibrations over inguinal glands, stomach exercise, etc. Result: No pain when foot was kept still;

she could walk rather well and less pain was caused when she did so. Before, she could not set her foot down flat on the ground, but only on the outer edge; now she walked on the whole of the foot as usual. Felt better generally.

April 16th: Patient slept very well all night. No pain in foot hardly, and she says she "feels as if she hadn't got anything the matter with her foot." Treated. A slight amount of pus exuded. Inflammation and redness much better. Swelling of the foot gone. Pulse 72, after treatment.

7 p.m. No pain of any sort even on walking. Some tenderness on pressure over tibialis anticus tendon. No redness along inner side of calf. Place on toe healing up very nicely. Treated.

April 17th: Slept very well. No pain. Inflammation and redness gone. Treated.

April 18th: Treated for last time. Foot and leg perfectly normal, excepting for the wound on the big toe which has some scabs on it, otherwise healing beautifully. Child wearing boot as usual.

April 19th: Patient went to school (first day of term).

March 1901: Quite well.

Case 2.

P..... A....., aged 9.

History: Patient hurt his left wrist about 4 days ago; he does not remember how. Swelling resulted and on April 1st in the evening he complained of stiffness in the shoulder joint. On April 2nd. his mother noticed red lines on his forearm and so came with him to Sanna.

Examination: Left arm had two hard red elevations near the wrist, one of which evidently contains some pus. Large red lines along front and external surface of forearm and inner surface of upper arm. Swollen glands in the axilla. Pain on moving shoulder joint, pain on pressure on the spots mentioned at the wrist; otherwise no pain. Fever present.

Treatment: Vibrations and running frictions from upper arm towards wrist; I managed to press some serum out of the places; the mother the same morning had squeezed out a little pus. Stomach exercise, etc. Boy said he felt better after it.

Treated 11.30 a.m. in the same way. Boy says he feels better. Treated 5 p.m. Better. Less pain in axilla. No fever.

April 3rd: 10.30 a.m. Much better. Treated. 8 p.m. Lymphangitis has disappeared; no pain in

axilla. Places near wrist much less red; one of them is almost gone with a little scab remaining. Treated.

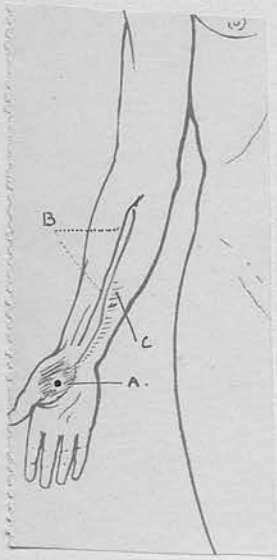
April 4th: Places at wrist practically normal. Arm normal. Treated for the last time.

Case 3.

Miss L....., aged 9.

History: Hurt her hand on November 4th (she is not quite certain as to the precise date). On November 6th there was a small inflamed sore place in the forearm and she came to me. On examination, there was an inflamed area over the base of the thumb, with a small abscess in the middle. (at A in figure 238) Along the front of the forearm was a red line which opened into one of the veins at the elbow (B). Internal to this was some redness which extended over the lower half of the forearm (C). There were swollen glands in the axilla. Temp 101°, pulse 135.

Fig 238.



Treatment: Locally, centrifugal vibrations and the pus from the wound was expressed. Constitutional treatment was given as well.

November 7th: No fever. No red lines. Pulse 120. Treatment as before.

November 8th: No swollen glands in axilla.

November 9th to 14th: A few centrifugal vibrations were given every day.

November 16th: No more pus. Wound healed up. Normal.

March 1901: Quite well.

Case 4.

David A....., aged 11. Got bitten in his left hand by a rabbit on November 1st. On November 4th the bitten place was painful; there was also pain in the axilla. On examination there was a wound which was about ½ inch long with a scab on it, which contained some pus. All the forearm on the ulnar side was very tender; there were one or two red lines of swollen lymph vessels visible; there were enlarged glands in the axilla. I vibrated centrifugally and gently evacuated the pus from the wound; constitutional treatment was also given.

Nov. 5th: Less pain in the axilla. Red lines gone. I pressed out some more pus.

Nov.6th: Glands in axilla cannot be felt any longer. Very little pain on pressure in forearm. Some pus came out.

Nov.7th to 10th: I gave centrifugal vibrations for two minutes, once a day.

November 11th, 12th, 13th: Same treatment. Wound healed up. No more pus. Cured.

March, 1901. Quite well.

CHAPTER VIII.

CHRONIC DISEASES OF THE NERVOUS SYSTEM.

I shall enter into considerable detail concerning the manual treatment of the above conditions, because the results yielded are so very striking. There is, perhaps, hardly any department of chronic disease where the difference from a practical point of view manifests itself so markedly between Ling's and Kellgren's systems. The greater success achieved by the latter arises chiefly from the fact that in it we have the direct nerve treatment by friction and vibration and that massage with vaseline is rigidly excluded.

I shall however only speak of those nervous conditions which I have personally had a chance of treating and watching closely. These are as follows:

1. Apoplexy of the brain, chronic stage.
2. Poliomyelitis anterior acute " "
3. Acute myelitis " "
4. Spinal haemorrhage. " "
5. Diphtheritic paralysis
6. Facial paralysis
7. Chronic bulbar paralysis.
8. Spastic paraplegia.
9. Locomotor ataxia.
10. Progressive muscular atrophy.
11. Disseminated cerebro-spinal sclerosis.
12. Hysteria.
13. Neuralgia.
14. Mental overwork, and a variety of functional disturbances.

For the sake of convenience I shall divide these into three great groups: they are as follows:

I. Conditions dependent on a lesion, nearly always sudden in its onset, in which the greatest amount of damage is done in a comparatively speaking short time and where there is a subsequent tendency to spontaneous improvement. Nos 1 to 6 come under this heading.

II. Conditions dependent on a gradual slow nervous degeneration (usually sclerosis), where the disease is insidious in its onset, where there is a tendency for the condition to get progressively worse, without hope of spontaneous improvement. Nos. 7 to 11 are included in this class

III. Functional diseases, Nos. 12 to 14.

I shall now enter into some detail concerning the pathology of the first two great groups above, and shall then give the rationale of the treatment. As regards the last group, I cannot give any such general details, as each case is different.

(see pages 450 &c.)

I. CONDITIONS DEPENDENT ON A SUDDEN LESION.

A. The general features in the pathology:

We have a disturbance in the motor path, which may or may not be accompanied by one in the sensory path. Thus we have a solution of continuity in some part of the path of the physiological nerve impulses which under normal conditions are generated in the motor area (upper neuron) pass down the spinal cord to the lower neuron, and by the motor nerves to the muscles which the individual wishes to move. In apoplexy this cutting off is in the upper neuron or the nerves between it and the lower neuron. In the chronic stage of anterior poliomyelitis we have it in the lower neuron; in that of transverse myelitis we have it both in the lower neuron and in the sensory path; in diphtheritic paralysis it is chiefly in the motor nerves leading to the muscles, and in the sensory ones, etc.

I have stated before that in all duplicate movements a sensory motor circuit is set up in the individual who is performing it. If either the sensory or the motor elements are disturbed in any way, then the movement will not go as it should. Variations from the normal will be presented showing all intermediate types from slight weakness etc., down to total paralysis. Those grades vary of course with

the severity of the lesion.

The above mentioned cuttings off of the motor or sensory path are the primary lesions; secondary ones may of course arise in the course of time as a result of the former.

B. The Manipulations:

which we apply in order to bring the pathological condition back to the physiological. Our object is to restore the continuity in the impaired sensory motor circuit, and our manipulations are divided into

1. Stimulating the nerves in the sensory motor circuit centripetally and centrifugally by nerve frictions. This is done by

(1) Giving a sharp head exercise to rouse the brain to increased energy; if however, the primary lesion is in the brain, we give special vibrations over the localized affected areas.

(2) Stimulating the cerebro-spinal system as a whole by means of such exercises as forwards lying, running nerve frictions, etc. This is done so as to increase the nervous excitability as a whole and thus we may get voluntary contractions in muscles earlier than we would if the tone of the nerves generally was not raised.

"Exner found that the most widely separated parts of the nervous system could act in a stimulatory way ("bahnend") on each other. In strychnine poisoning a localized irritation is able to call forth a wide spread muscle cramp ..... There is no doubt that this phenomenon is brought about by the nerve cells. The resistance is diminished at the same time that the excitability of the nerve cells is increased." (Prof. A. Goldscheider "Die Bedeutung der Reize für Pathologie

und Therapie im Lichte der Neuronlehre" 1898. p.3, translated.)

(3) Frictions over the motor nerves of the weakened or paralysed muscles.

(4) Frictions over the sensory nerves of these parts. These will tend to produce a double effect.

(a) Stimulation of ordinary sensation and of the sense of localization and co-ordination.
(b) Reflexly we get growth of the underlying muscles. The above have been described already.

I have already mentioned the fact that motor impulses and sensory ones also pass both ways, centripetally and centrifugally. Thus our nerve frictions will cause stimulation of the degenerated parts in the sensory motor circuit in both directions. Whether the motor nerve impulses (which we call forth by our motor nerve frictions) can pass centripetally through the spinal cord to the brain or not, is a point I cannot discuss. In any case they pass up to the lower neurons and thus diminish the resistance offered to nerve impulses coming from the motor area.

I have referred above to stimulation of sensory and motor nerves as though the frictions on them were given separately, first on one and then on the other. In practice, however, these manipulations are given together on mixed nerves, as purely sensory

and purely motor nerves are rarely found thus isolated. Even if in a mixed nerve, where only the motor path is paralysed, the sensory part remaining intact, we can by stimulating both elements gain a greater effect than if we only treated the motor path - the increased excitability in the sensory part raises the tone of the motor part and the nerve as a whole.

2. Trying to get the patient to use all the energy he is capable of to move the paralysed muscles.

By our various fixations of the limb, we can set all the other muscles at rest excepting those we want to exercise, and thus the patient can concentrate all the energy he has at his command on the latter.

One must not be content by merely trying once, and then if no movement result, to give up the attempt. I have observed in some cases of apparent total paralysis that after continually exhorting the patient to try his best, a little active movement could be done by him after a minute or so. This arises from a kind of summation of stimuli.

These attempts to bring forth voluntary muscle contraction are of the very greatest importance, and I think generally admitted to be such. "In all

cases of paralysis the best stimulus which can be employed is the normal stimulus of the'will'; it excites the functional activity of the nerve cells and aids the restoration of the damaged (degenerated) nerve fibres; each fresh effort of the 'will' sends a nerve impulse up to the point of the lesion; repeated efforts of the 'will' gradually, as it were, force a passage through the 'block'. Frequently repeated, voluntary stimuli are especially useful in those cases in which the paralysis is due to a lesion of the nerve tubes." (Dr Byrom Bramwell's "Diseases of the Spinal Cord" 1895, pp. 99 & 100.)

3. Manipulations on the muscles which are weakened or paralysed. First and foremost come our nerve frictions on the sensory and motor nerves, as already mentioned. Muscles react more to stimulation of the motor nerves leading to them than to stimulation of themselves in a non-nervous preparation, and thus nerve frictions are a much more powerful stimulatory method than ordinary muscle kneading, etc.

Then we have passive flexions, extensions, and other movements at joints, which as already explained, have the following effects: (pages 59%).

(1) Stimulation of the muscles from their alternate elongation and shortening.

(2) Furthering of the blood circulation and lymph flow, bringing of more arterial blood to the parts and thus supplying the muscles (and the nerves) with more nutritive matter.

(3) The stimulatory effects on the part as a whole, due to traction which we keep up in every case when possible.

(4) Stimulation of the nerves of the part from alternate elongation and shortening. There is also a kind of "encouraging" effect. Our movements in a way suggest to the patient how they should feel if he did them himself, and he begins to see movements done which he has not seen since the onset of the paralysis; thus he is encouraged to try all the more to learn to perform them, which he had practically concluded were never again to be done.

Concerning the beneficial effects of passive movements, Prof. Goldscheider, in "Die Bedeutung der Reize für Pathologie and Therapie im Lichte der Neuronlehre", 1898, p.77, says (translated) "In hemiplegias as well as in spinal or peripheral paralyses one can sometimes see that under the influence of passive movements the voluntary impulses, hitherto inadequate, at last can manifest themselves. Naturally, this is only found in those affections in which the cause lies not in the complete abolition of conductivity, but is merely due to some impediment in the path of the same."

It is of the greatest importance to try and bring about the re-establishment of voluntary motor power. Let me take a case of nearly total paralysis

of the anterior tibial muscles; the patient cannot flex his ankle joint. This however does not justify our saying that he has no voluntary muscle power here. We test in two ways:

(1) Asking him to assist us with all his might, while we slowly perform passive flexion of the ankle.

(2) Asking him to resist us with all his might while we, having first flexed the ankle, slowly perform extension at that joint.

We often find that in such cases that some assistance or resistance can be felt, and we accordingly give these movements of :- foot flexion with assistance and foot extension PR. and the patient as his strength increases in these, will at last be able to do foot flexion PA. Were we to omit these assistance and resistance movements, we should not get the improvement to take place so rapidly.

The golden rule in paralysis is: "Try and get the patient to do voluntarily what he cannot in consequence of the lesion," and our movements and manipulations must be built upon this as a fundamental principle.

4. We treat the condition as a whole in order to tone up the body generally, improve the circulation, and promote elimination. Special attention must be paid to any special organs, such as heart, if valvular lesions exist., etc.

II. CONDITIONS DEPENDENT ON GRADUAL SLOW NERVE DEGENERATION (Usually Sclerosis.).

As before I shall consider the following:

A. The Pathology;

B. The manipulations which we apply in order to bring the pathological condition to the normal one.

A. The Pathology:

These conditions commence insidiously by a gradual slow process of degeneration, either diffuse or limited to some special tract. The site of degeneration in the nerve or nerve cells, differs; it may be loss of the medullary sheath, or white substance of Schwann, or elsewhere; and may occur in the nerve fibres or cells in the brain and spinal cord, or in the ganglia or in the nerves themselves.

In consequence we have some disturbance in the sensory or motor path, and we can test for this by giving various duplicate movements; the defect, varying from a very slight to a very great one, will then manifest itself.

Thus we have, broadly speaking, in

(1) Chronic bulbar paralysis, disturbances in motion,

(2) Primary Spastic Paraplegia " " "

(3) Secondary " " disturbances in motion and usually also sensation.

(4) Locomotor ataxia, disturbances in sensation,

(5) Progressive muscular atrophy and amytrophic lateral sclerosis, disturbances in motion.

(6) Disseminated cerebro-spinal sclerosis, disturbances in motion with or without disturbances in sensation.

B. The Manipulations which we apply in order to bring the pathological condition back to the normal one.

Much of the method here resembles the one in cases dependent on a sudden lesion, but repetition cannot be avoided as there are some differences concerning what we desire to accomplish.

Our object is to try and re-establish the continuity in the sensory motor path by removing the interruptions. This is done as follows:

1. Stimulating the cerebro-spinal system as a whole and specially the disturbed sensory motor circuit. This is done by nerve frictions general and local, by which degenerations will tend to disappear and in some cases it would seem that we can really obtain complete disappearance of sclerosed parts, and absolute and permanent recovery results. For this, however, our nerve treatment will not in itself be sufficient, but we must combine with it other manipulations, i.e.,

2. Exhorting the patient to do his utmost to try and perform various movements, which we find are difficult or impossible; this will train the disturbed sensory motor circuit; he will try and get

his nerve energy to travel down the right path by doing his best to inhibit any other movements which tend to accompany the one he is attempting. Thus a disseminated sclerosis will try to inhibit the volition tremors and endeavour to contract only the muscles he wishes. Thus he will learn to remove the interruptions and re-establish the "isolation" in the nervous path.

3. Movements at joints. In very advanced cases only passive ones can be given, but active ones must be attempted as soon as possible; either purely so or duplicate. In them the patient must do his utmost to use all the energy he is capable of, as mentioned in 2.

Under this heading I must include walking. The patient must endeavour to walk as much as possible, avoiding of course over strain, assistance from one, two or even more persons being granted if he needs much help. The amount of aid granted, however, must be the least possible - not so much as to relieve him of all the genuine attempts on his part which are so necessary for him. He should be made to look forwards or even upwards, not downwards on

the ground in front of him while walking.

4. To treat the constitution as a whole, paying special attention to any affected organs that may be present, such as bladder, rectum, etc.

Concerning the possibility of curing sclerosed conditions of the brain and spinal cord, I regret that I have not since I passed my M.B.,Ch.B. in 1898, personally been able accurately to follow cases where the diagnosis was quite clear which have been really absolutely cured. But of course the time that has elapsed since then has been too short to allow of this, especially as such apparently cured cases have to be watched for years and years before one can definitely say that the cure is perfect and permanent.

Still, I think that the steady improvement that has taken place in the case of disseminated cerebro-spinal sclerosis which I describe at length on pages 428-449, warrants me to say that a permanent cure is by no means impossible in this patient. And as this condition is among the very hardest to cure, I venture to say that there is a fair chance of curing other sclerosed conditions. Under any circumstances, I however think that ~~in~~ all such cases, not in the final stages and not too heavily dosed with drugs, electricity, etc., will derive decided benefit from

the manual treatment.

Considering how little we expect from such measures as internal remedies, electricity, etc., I would suggest that Kellgren's treatment should be given a trial as soon as possible after the diagnosis of sclerosed condition is suspected or established. There is nowadays a growing tendency to try some irritative nerve methods combined with gymnastic and nerve training, and in theory this plan seems to hold out more hope than any other. On the Continent we observe these methods gaining ground, as in Prof. Fraenkel's new treatment for tabetics, although it must be confessed that nearly all the so-called discoveries in this line of treatment have already been known to the Ling school for many years.

Dr M. Kohn, M.D. in "Le Traitement de Kellgren" p.14, says, after having briefly described the modus operandi, (translated): "And finally, as a practitioner of 30 years standing, this is the first time in my life that I have seen by the above described manipulations, a quantity of other internal and external diseases, those of the spinal cord (morbus spinalis) sclerosis in the spine (tabes dorsalis) inflammations of the spine (meningitis spinalis) treated with such a beneficial effect..... Medico-scientific therapeutics employed up to to-day for these grave nervous diseases is not in a condition to show such results."

In the paper on manual nerve treatment which Dr Arvid Kellgren read before the eleventh International Medical Congress at Rome in 1894, he says, "There is no doubt but that by means of nerve vibrations combined with other passive and active movements, not only can the progress of most of the nervous disorders be stammed, but even a cure effected..... I feel sure that many doctors who have taken up the manual treatment as a speciality have, like myself, more than once been astonished at the results actually obtained."

I would specially wish to emphasize the fact that the manual treatment should be given a trial as soon as possible, because the experience of the Kellgren school concerning the treatment of cases which have been previously subjected to prolonged courses of strychnia, arsenic, bromides, electricity, etc., is as follows;

(1) Cases treated by the latter without improvement are very difficult to benefit by the manual treatment.

(2) Cases that have never had any treatment, even if they are of many years' standing, are more easy to improve by the manual method than comparatively recent cases as in (1).

(3) Cases treated by internal remedies and electricity which have improved with those methods, usually improve much faster with the manual treatment.

(4) Cases which have been under the manual treatment and have improved thereby, who for various reasons have stopped this method and gone back to other measures, have usually ceased to improve and in sclerosed conditions have gone back again.

(5) Cases which have been under the manual treatment and have improved thereby, who for various reasons have stopped this method and have not taken any other treatment, often continue to improve. (See a case of Locomotor Ataxia in "Zur Technik der Schwedischen Manuellen Behandlung" by Dr Arvid Kellgren., 1895, p.141 &c.).

Cases coming under (4) and (5) are rare and often difficult to trace; but all those that I have been able to follow up seem to go on as mentioned.

My own experience is as follows:-

(1) Locomotor ataxia: Two cases fairly recent, cured; still under observation. Four cases, from 5-8 years standing; three very much improved, one somewhat improved.

(2) Disseminated cerebro-spinal sclerosis. One case. Improvement slow, though steady. (See pages 428 - 449.)

(3) Lateral slcerosis. Case 1., of 15 years duration; steady improvement since 1895; patient is, however, only treated three months in the year.
Case 2, of 2½ years' standing, progressing slowly: the improvement is continuing under the treatment of my colleague, Mr Harry Kellgren.
Case 3, patient first noticed something wrong in June 1899, got rapidly worse, ceased working in July, in August he got five weeks electricity. I treated him from October to December, 1899, but the progress was downhill all the time. The patient died in October 1900.

(4) Bulbar paralysis: One Case. Improvement for two months, then result almost negative. See pages 424 - 427.

(5) Progressive muscular atrophy: One case, 6 years' duration. Slight improvement after one month's treatment.

(6) Apoplexy: I have watched several cases of this; in all of them improvement has taken place.

(7) Poliomyelitis anterior acuta, in the chronic stage; 8 cases. Improvement in all.

(8) Acute myelitis, chronic stage: 1 case nearly cured. One case of spinal haemorrhage, chronic stage -- quite cured.

(9) Facial paralysis: One case, cured (pages 418 & 419) another case which had been given electrical treatment for 1 year, slow but steady improvement during five months' treatment.

III. FUNCTIONAL DISEASES.

I cannot give any general scheme for treatment, as each case must be taken on its own merits and suitable exercises given accordingly. As a general rule we have loss of control over the nerves and our treatment must be directed towards restoring it. In the cases I give, however, I must refer the reader to the gymnastic treatment which is given, and let him find the rationale there.

A. APOPLEXY.

These have long been considered amenable to gumnastic treatment by the Central Gymnastic Institute, and an interesting question arose concerning the method by which cure is established; Prof. Hartelius, in "Tidskrift i. gymnastik," 1875, part 3, p.111, puts it as follows (translated): "It does however, sometimes happen that paralysis, as for example, after cerebral haemorrhage, can under gymnastic treatment not only diminish, but disappear. One then asks of oneself what is the change in the brain that has taken place? Have the interrupted nerve filaments grown again? Or have the nervous elements found a new path? Neither the one nor the other is impossible." More modern researches seem to shew that the new nervous path is the same as the old one; nerve fibres tend to regenerate in the course they originally ran.

The treatment of old apoplexy is on the lines concerning those used for conditions dependent on a sudden lesion.

Embolism into the Internal Capsule:

Hannah Anderson, aged 39, came to me on August 8th, 1900. Her history was as follows: She has

been suffering from heart disease since 1876. In March, 1899, she had an attack of influenza, and got up too soon. A relapse took place and in the night of April 1st, 1899, she had an apoplectic attack, resulting in complete paralysis of the left side of the body (face, arm and leg); the tongue was also affected. There was transient aphasia after the occurrence. After two weeks at home she was taken to the hospital in Hvetlander on 17th April 1899 and stopped there until 19th May, 1899. She did not improve much, some movements at the elbow and slight ones in the lower extremity returned gradually.

She then went to a convalescent home, and got baths for two months from June 1st to July 31st 1899. She left there and then got electricity for amonth. This, however, did her less good than the baths. She then went home. In May 1900 she got massage and went on with this treatment until August when she came to me.

She says that none of the treatment she underwent ever seemed to do her any good worth mentioning, and that she got better gradually by herself as quickly during the time when no massage or electricity was being given as when it was.

The hospital certificate said "Vit org. cordis plus hemiplegia sin. (Embolia art. cerebri)" signed by Dr Emil Olson.

Examination:

Patient still has some facial paralysis on the left side; when half smiling the right side of the mouth draws back , but the left half remains stationary. Patient walks very slowly with the help of a stick and swings her left leg round in a half circle. On the journey here she had to walk from one station to another; the distance was ¾ mile but it took her 3 hours.

Sensation is quite good in the paralysed area. Pupils normal. There is slight knee clonus on the left side and some ankle clonus; the patellar reflex is exaggerated. There is a biceps jerk in the left side, but not an extensor one. Frictions on the posterior interosseous nerve cause twitchings of the fingers (dorsiflexion). Frictions over the musculo-spiral nerve produce this to a less extent. Repeated friction on the internal plantar nerve cause a little flexion of the hipjoint.

Most of the muscles are stiff in the affected areas, excepting in the thigh where some of them are flabby. There is however no actual wasting. Occasionally involuntary spasmodic movements of the fingers took place, but nowhere else.

Voluntary Movements of Left Side;

Shoulder Joint:

Flexion, Fair, through angle of 90° or so.
Extension, Hardly any.

Internal Rotation: Good.

External " : Very little.

Abduction: Cannot abduct arm to right angle.

Adduction: Good.

Pressing elbow backwards with upper arm horizontal: Upper arm cannot be pressed backwards to or less than 45° with coronal plane. Patient cannot put her arm in neck firm or keep it there when so placed for her when she is in half lying position.

Elbow Joint:

Flexion: Good, but muscles very stiff.

Extension: Weak.

Radio-ulnar Joints:

Supination: Cannot supinate to more than mid-position.

Pronation: Good.

Wrist and Fingers:

Flexion: Normal, but cannot close her fist.

Extension: Hardly any: Extension of thumb a little better than that of fingers.

Hip Joint:

Abduction: Weak.

Adduction: Normal.

Flexion: Very little.

Extension: Fair.

Rotation: Very weak.

Knee Joint:

Flexion: Very weak. In forward lying position cannot lift her foot off the bench, though hamstring muscles can contract.

Fig. 239.

Fig. 240.

Extension: Good.

Ankle Joint:

Flexion: None.

Extension: Good.

Toes: Slight movements possible.

The maximum amount of voluntary abduction of the left shoulder and extension of the wrist and fingers (the forearm being fixed) are shown in figs 239 & 240.

Heart Symptoms:

Patient complains of a continued anxious feeling in cardiac region. The cardiac impulse can be seen in the 5th and 6th spaces in the nipple line (fig. 241) On percussion, the extent of the dullness is as in fig. 241. Auscultation: At the apex there was a diastolic murmur propogated slightly round into the axilla. Great arythmia with pauses and intermittences. The heart sounds are very indistinct, vary very much and occasionally almost disappear for a few beats. They merge into one another very frequently. Pulse about 150; there is however, great difficulty in counting, owing to the great irregularity. Sphygmographic tracing herewith (fig. 252A) taken before treatment.

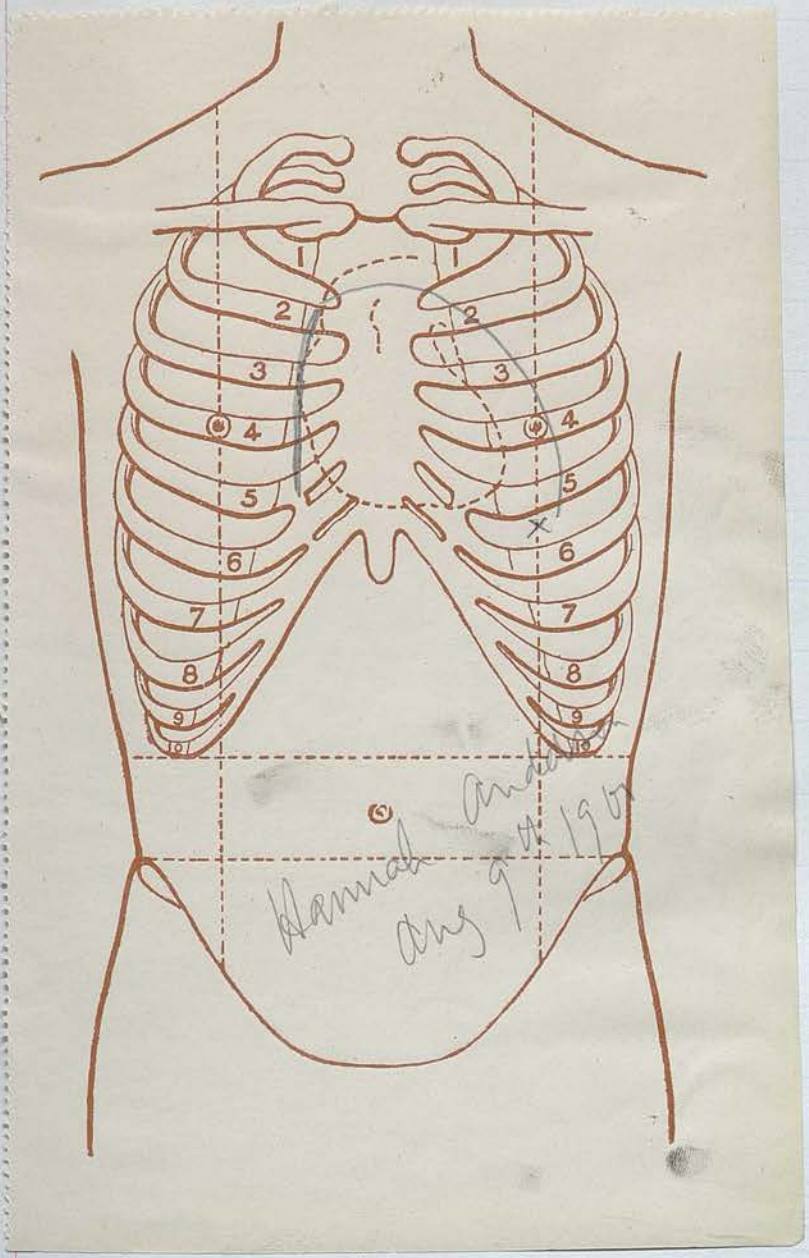


Fig. 241.

Treatment:

(1) Sitting head exercise, PP., frictions on the left facial nerve PP.

(2) Sitting left arm exercise, including

Arm abduction AR, adduction PR.
Supination AR, pronation PR.
Elbow extension AR, flexion PR.
Finger & wrist extension AR, flexion PR.
Nerve frictions, etc. specially posterior interosseous.

(3) Half lying double arm rolling PP, extension AR, flexion PR.

(4) Half lying double foot rolling PP, flexion & extension AR.

(5) Forwards lying running nerve frictions PP, length hacking PP, knee flexion AR, extension PR.

(6) Half lying double leg rolling PP, flexion AR, extension PR.

(7) Half lying stomach exercise, heart vibrations, side shaking, etc., PP.

Extra movements were often given, but the above represents the general prescription. All the movements had to be given carefully, in consequence of the cardiac derangement. In many cases the first part of the duplicate movements, as in (2), were given PP at first, then PA, and then AR, gradually increasing resistance being offered as the patient's strength came back.

Progress:

August 8th: Already after the first treatment the toes could move a little better.

August 9th: The heart is quieter according to the patient, and there is not so much feeling of anxiety now. The heart can be felt to beat slower, but just as irregularly.

August 10th: Patient can abduct arm to more than a right angle; movements of the toes a little better. She walks better. The anxious feeling in her heart has quite left. The extensors of the forearm are stronger.

August 15th: The facial paralysis has disappeared. She walks better and does not use a stick. The extensors of the forearm and abductors of the shoulders are stronger; see figs. 242 & 243 for her maximum efforts in this direction.

August 21st: Improvement continues. Complete supination can be done.

August 24th: Extensors of forearm and abductors of shoulders are stronger; see figs 244 & 245 for the maximum efforts.

September 3rd: The abduction at the shoulders is still better (see fig. 246) The elbows can be

Fig. 242

Fig. 243

Fig. 244

Fig. 245

Fig. 246.

Fig 247.

drawn back to form about angle of 22° with coronal plane.

Sept. 15th: Fig. 247 shows the further improvement in abduction. Some flexion of the knee in forwards lying position can be done, and also extension PR. The stiffness of the muscles in giving leg rolling and arm rolling is almost gone, but the range of passive flexion and extension at the ankle is not complete; the toes can move through an arc of about 2 inches. She can now use the fingers of the left hand to button her clothes if buttons are in a convenient position in front.

Sept. 18th: Patient took a walk of four miles to-day, half of which was very much uphill.

October 1st: Treatment is now as follows:

(1) Sitting head exercise PP, frictions on the facial nerve PP.

(2) Heave grasp standing drawing forwards PP, heart vibration PP.

(3) Sitting left arm exercise, as before.

(4) Half lying double foot rolling PP, flexion AR. extension PR.

(5) Half lying double arm rolling PP, extension AR, flexion PR.

(6) Forwards lying running nerve frictions PP, back hacking PP, knee flexion AR, extension PR.

(7) Half lying double leg rolling PP, flexion AR, extension AR.

(8) Half lying stomach exercise, heart vibration, side shaking, etc. PP.

Oct.3rd: Abduction of arm nearly up to the vertical. See fig.248&9. Elbow can be drawn back to coronal plane.

October 14th: Left arm can be put into neck firm position (when patient in half lying position) and can be kept there with difficulty.

Oct. 23rd: Can extend fingers and wrist to lie in straight line with forearm.

Nov. 1st: Can extend them to more than straight line. Walks quicker. Flexion of knee better.

Nov. 5th: Extension of thumb PA is normal.

Fig 248.

Fig 249.

Date Oct 3rd
1900

Fig 250.

Examination: December 20th, 1900.

Patient can walk much better than when she came. The reflexes are about as before.

Voluntary Movements

Shoulder Joint:

Flexion: Good.

Extension: Weak.

Internal rotation: Normal.

External " : Good, can do this with a good deal of AR.

Abduction: Good. Can abduct to nearly the vertical.

Adduction: Good.

Pressing elbow backwards: Very good; can do it as far back as the right arm with AR.

Elbow Joint:

Flexion: Normal.

Extension: Can extend to a straight line.

Radio ulnar joints:

Supination: Can fully supinate with AR.

Pronation: Good.

Wrist and fingers:

Flexion: Can close her fist.

Extension: Can extend fingers and wrist to straight line or even a little more sometimes. Complete extension of thumb can be done with AR.

Hip Joint:

Abduction: Normal

Adduction: Normal.

Flexion: Good.

Extension: Very good.

Rotation: Very little improvement.

Knee Joint:

Flexion: In forwards lying position she can flex it to a right angle and resist in extension PR.

Extension: Good.

Ankle joint:

Flexion: Good.

Extension: Normal.

Toes:

Flexion: Fair.

Extension: Good.

I have not been able to take any photographs, owing to the state of the weather and the limited amount of sunlight.

Heart Symptoms:

The apex beat is nearer the sternum than before. The cardiac dullness is less than when she first came (fig. 251). The diastolic murmur is not so distinct as it was. The heart sounds are not so faint as they

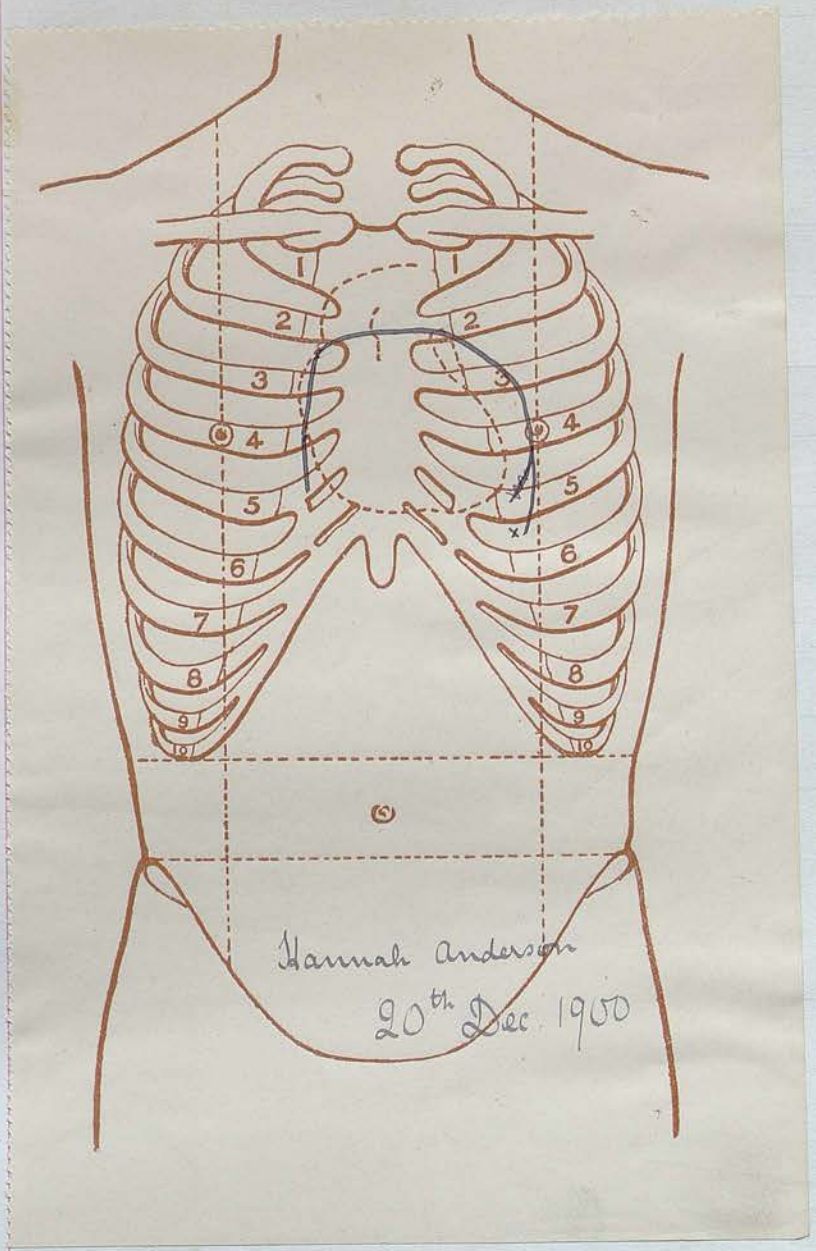
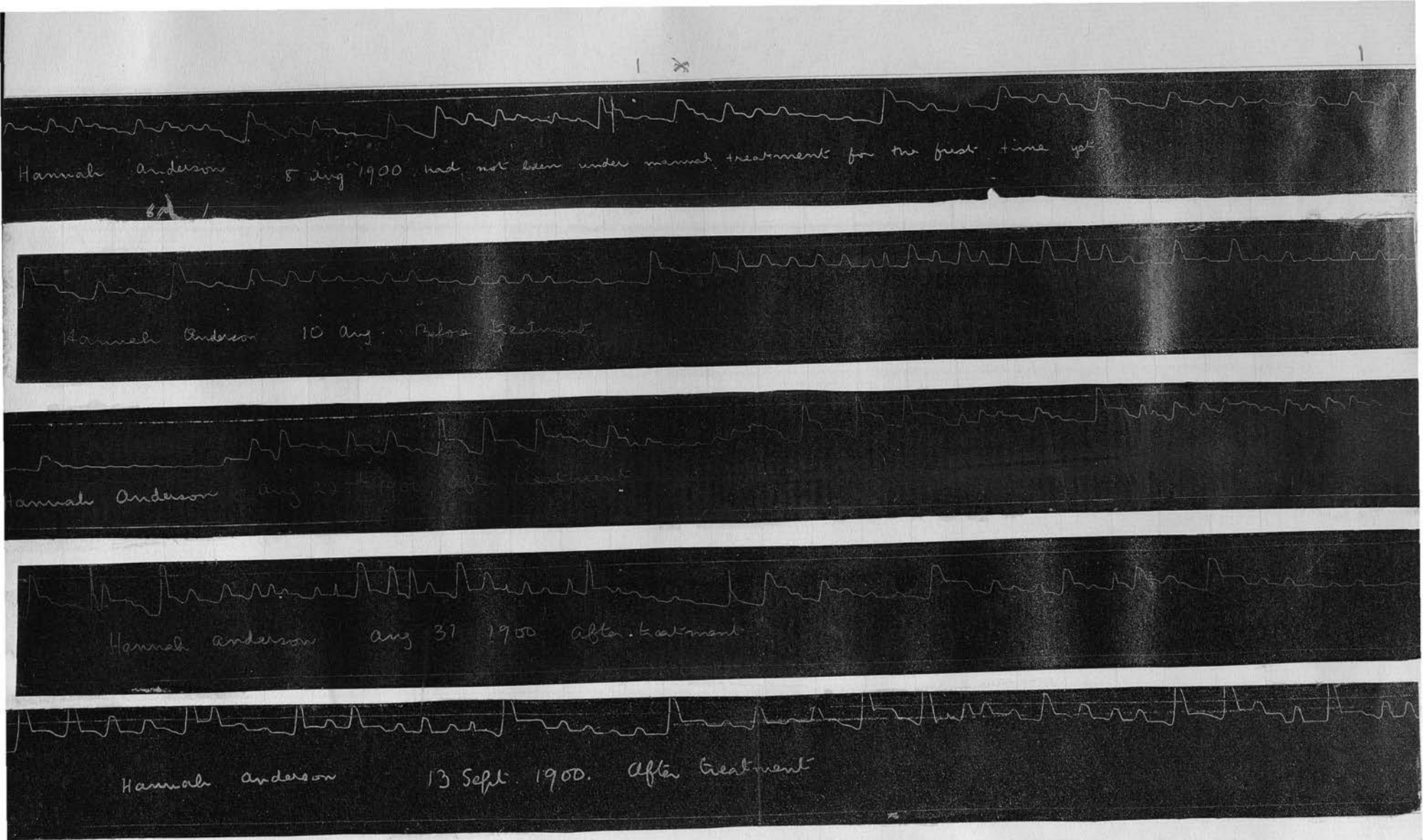


Fig. 251.


Hannah anderson 8 aug 1900 had not been under mornet treatment for the first time yet
Hannah Anderson 10 Aug. Before treatment
Hannah anderson aug 31 1900 after treatment
Hannah anderson 13 Sept. 1900. After treatment

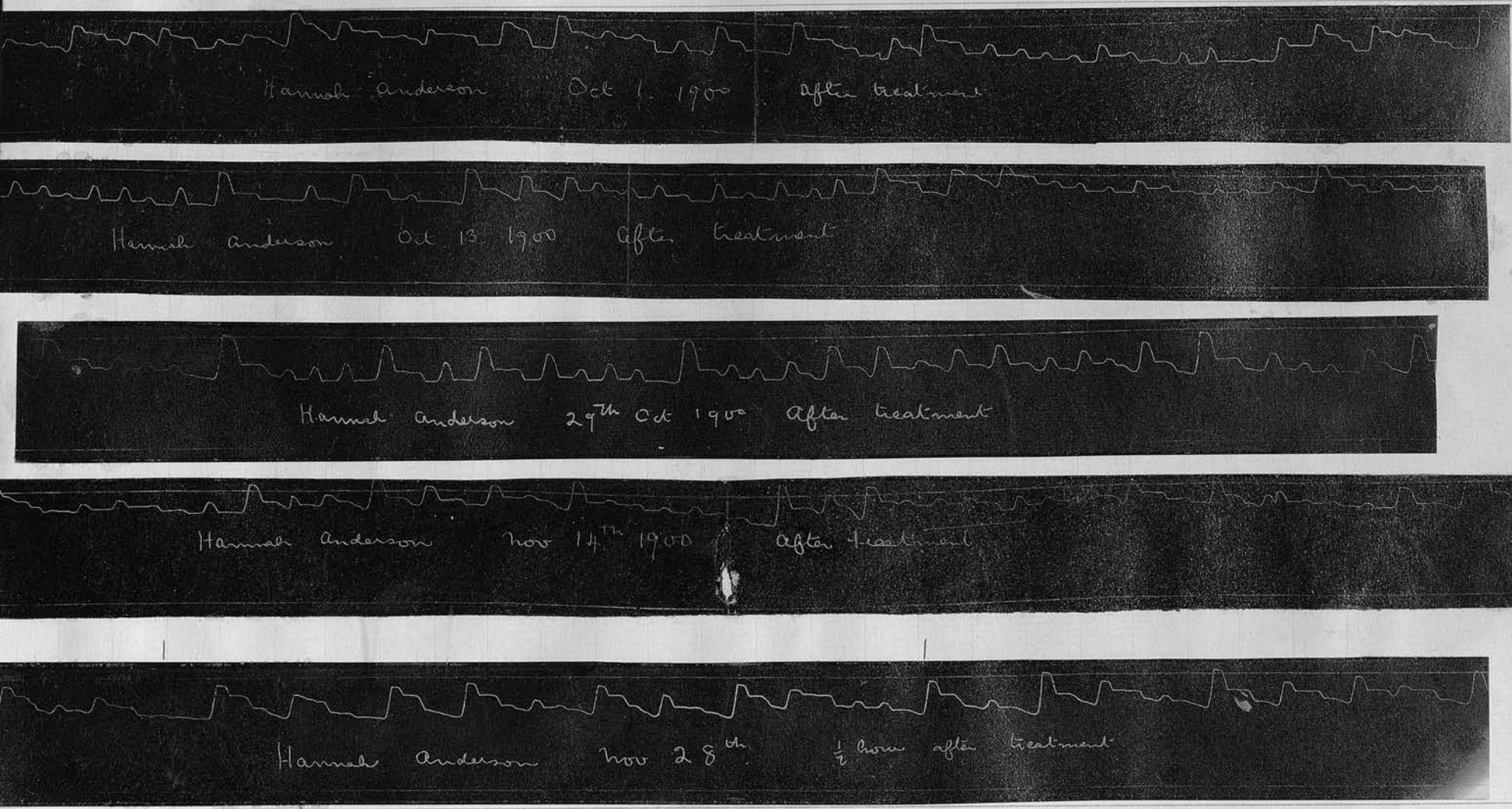
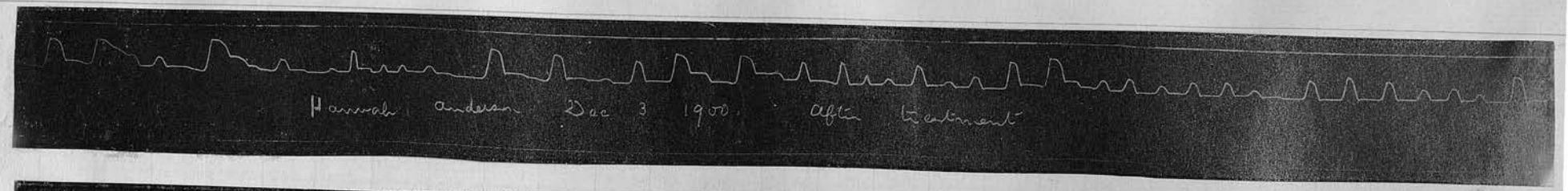
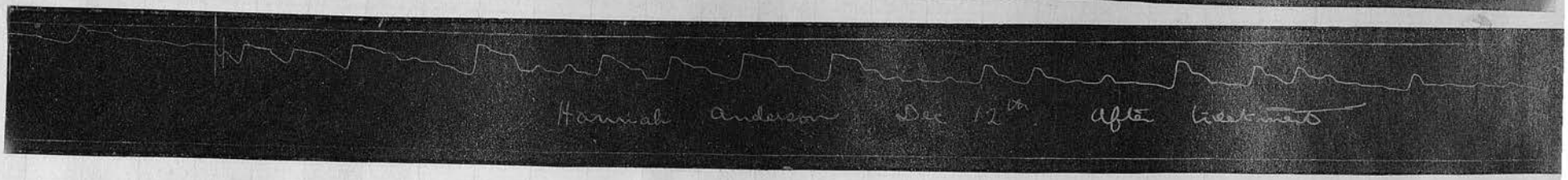
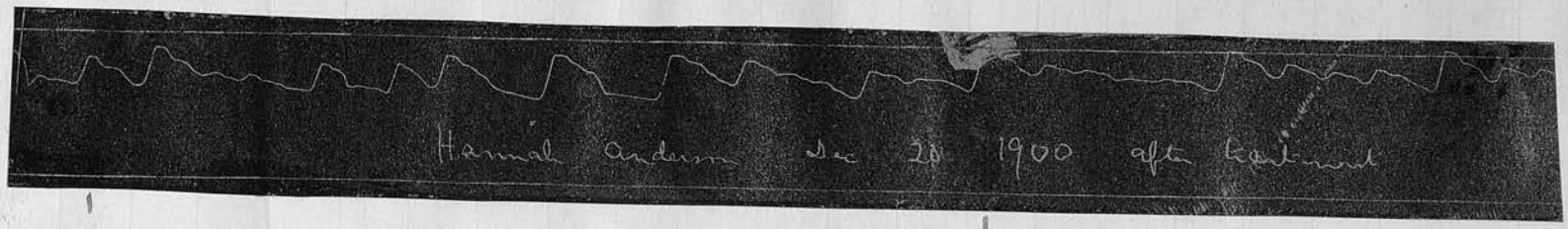


Fig 253 A
" B
" C
" D
" E







Figs 254 A " B " C " D

Fig 255.

used to be and the irregularity is better. Various syphgmographic tracings taken from time to time are shewn in figs. 252A - 254D.

Patient is continuing the treatment under my colleague, Mr Harry Kellgren, who on April 3rd, 1901, sends me the following report:

"Pulse irregular, slow, small but fairly full, easily obliterated. In the epigastrium there is a visible pulsation and vibration. The cardiac dullness is the same as on November 20th. The diastolic murmur cannot be heard. The heart beats somewhat stronger, but is still very arythmical and the sounds merge into one another; sometimes occasional extra sounds can be heard.

"Paralysis: There is not much change in the leg. The walk is somewhat but not much better. It is more steady. In the ankle joint there is considerable improvement . She can flex the foot quite well actively.

The arm is considerably better. She can extend all the arm and hand joints simultaneously to almost their

full extent. There is still some stiffness, chiefly in the wrist. Patient can perform almost all movements actively, although slowly and with difficulty. Shoulder joint quite free.

Since the 20th March regularly in the night patient has been having some stiffness and extension of the paralysed limbs. After some time this disappears spontaneously and does not appear to be a bad prognostic sign when taken with the general condition otherwise."

A sphygmographic curve taken on March 5th is shown beneath. (Fig 225).

Poliomyelitis Anterior Acute, Chronic Stage:

Nothing special need be said concerning the treatment of it; the method must be gathered from the general statements already made concerning the treatment of conditions dependent on a sudden lesion.

To give massage, pure and simple, in this condition, as recommended by some authors, is in many cases attended with negative results. This is because the massage does not attack the cause of the disease, i.e., the disturbed nervous elements. Much greater results are obtainable by giving direct nerve treatment.

I will here mention that in 15 cases of this disease in the chronic stage (I had not treated any of them in the acute) I found in 12 of them distinct tenderness or even pain in giving frictions over the kidneys from behind or over the renal plexus in front; in nearly all of these there was a greater tenderness over the kidney on that side where the paralysis was greater, or in the case of only one limb being affected, on that same side and not at all on the other, which had by this time recovered.

Case 1. G ..... L....., aged 15½ years.

Came under treatment on October 3rd, 1899. The history was as follows: in October 1888, he got ill one day with shivering and fever, and about a day afterwards complete loss of motion in both legs resulted, sensation however being unimpaired. After three weeks the right leg gradually recovered, and got quite well, but the left one made no progress at all to speak of.

Examination:

Patient is a small sized subject. He walks with two crutches, using only his right leg; his left one hangs limp and loose, and is two inches shorter than the other. The muscles of the whole left leg, from gluteal region to toes, are very much atrophied; the quadriceps femoris for two inches above the knee is a mere fibrous band, as are also the muscles of the back from the 9th dorsal vertebra on that side.

Voluntary movements of Left Leg: Hip Joint:

Flexion: Very weak.

Extension: Hardly any.

Abduction: None.

Adduction: Slight.

External Rotation: None.

Internal Rotation: None.

Knee Joint:

Flexion: Very slight.

Extension: None.

Ankle Joint:

Flexion: A trace.

Extension: A trace

The abdominal and spinal muscles are very weak. There are no reflexes on the left leg. Sensation is quite good.

Treatment:

(1) Sitting head exercise PP.

(2) Half lying left leg rolling, nerve frictions PP, muscle kneading PP.

(3) Half lying left leg flexion PA, extension PA.

(4) " " " foot rolling PP, flexion PA. extension PA.

(5) Forwards lying running nerve frictions PP, length hacking PP.

(6) Sitting trunk extension flexion PA.

(7) Sit lying left knee extension and flexion PP, extension PA, flexion PR.

(8) Reach grasp toe standing double knee bending PA.

(9) Reach grasp left knee flexion and extension PA, sciatic nerve frictions PP.

(10) Stretch stride standing bending forwards PA.

(11) Half lying stomach exercise PP.

In the above PA was not always strictly adhered to, and in most cases the movements were given with

assistance, in some even PP. The guiding rule was to try and get the maximum amount of voluntary movement in the parts exercised.

Progress:

October 6th: In sit lying position patient can swing his leg to and fro a little, the maximum space through which the swinging is done being two inches. He says his back is stronger.

Oct. 8th: Patient's foot can be actively flexed and extended, the toes passing through about 1½ inches of space (maximum).

Oct. 25th: Patient's leg is stronger than before; the atrophy is diminishing. The quadriceps is larger and is much thicker over the lower third of the femur.

Oct 31st: Patient can now use his quadriceps so much that he can maintain his lower leg, when in sit lying position, so that the heel is about three inches from the perpendicular.

Nov. 2nd: Patient says his back is stronger.

Nov. 13th: His calf muscles are developing more than his anterior tibial. He can do foot extension AR, but the slightest resistance to flexion annuls all his efforts to do that movement.

Nov. 17th: Patient no longer needs support in exercise (6) for the going backward; but requires a little to come up again.

Nov. 22nd: Patient did exercise (6) without assistance.

Dec.20th: Finished treatment for the time being. Stronger.

Resumed treatment Feb. 15th 1900.

Condition: He is still stronger in his back than when he left, and his leg has also improved slightly. He can now swing his leg up on to the 3rd step of a ladder; before he could only do the 2nd. Rectus larger than before and he does exercise (6) quite well. He can now resist when extension at the ankle is made, and can manage to bend his knee and thigh and extend them again by himself after leg rolling.

March 20th: He can overcome a little resistance in foot flexion AR and resists more in foot extension PR.

April 13th to 16th: Not treated.

April 17th: Left foot getting stronger slowly.

April 23rd: Left off treatment until May 7th.

May 7th: Resumed treatment again. Prescription changed to the following:

(1) Sitting head exercise, PP.

(2) Lying left leg flexion AR, extension PR. flexion PR, extension AR.

(3) Half lying left foot rolling PP, flexion & extension PA.

(4) Half lying left leg rolling PP, flexion & extension PA.

(5) Half lying left leg rotation, external and internal PA.

(6) Forwards lying running nerve frictions PP, length hacking PP,

(7) Sitting trunk extension, flexion PA. Sit lying left knee extension and flexion PP, extension AR, flexion PR.

(8) Ride sitting trunk flexion PR, extension AR.

(9) Reach grasp standing left knee flexion & extension PA, sciatic nerve friction PP.

(10) Reach grasp toe standing double knee bending, PA.

(11) Hook half lying double knee abduction and adduction PA.

(12) Half lying stomach exercise PP.

In all the above, resistance was offered if possible in the PA exercises, in order to increase their effect.

Progress:

May 23rd: Flexion of thigh stronger this week. Gluteal region and abductors however still very weak.

June 2nd: Flexion of thigh still improving; gluteal region also improving.

June 6th: Anterior tibial muscles getting on very well.

July 10th: Not much improvement this last month, excepting in the gluteus maximus.

September 25th. Patient finished treatment. He can now hobble along a little without any support. The muscles of the left leg are now larger in bulk than when he first came; the spinal and abdominal muscles are stronger.

Voluntary Movements of Left Leg:

Hip Joint:

Flexion: Good.

Extension: Fair.

Abduction: Weak.

Adduction: Good.

External Rotation: Weak.

Internal " : Very little.

Knee Joint:

Flexion: Can flex it to an angle of 45° with the bench when in forwards lying position and can offer resistance in knee extension, PR.

Extension: Can extend through an angle of 45° when in sit lying position, and resist in knee flexion PR.

Ankle Joint:

Flexion: Can flex foot to right angle with lower leg.

Extension: Very good.

There are no reflexes in the left leg.

Although this case was not by any means cured, still it shows what can be done even where a condition of almost total paralysis has existed for 11 years.

I omitted to mention that in this case the bladder seemed very tender indeed; but that this diminished and was almost gone in September.

Case 2. H..... S....., aged 20.

In November 1898 she caught a cold and on waking up two days later she found after a feverish night that she could not move her lower limbs, although sensation was intact. She recovered some use of them however and after a week she could just manage to walk along with assistance.

She was then taken to the hospital in Jönköping, where the diagnosis of poliomyelitis anterior acuta was recorded, and the patient was given electricity for 11 months daily. The improvement that resulted, according to patient's account, was fair as regards the left leg but very slight as regards the right.

In November 1899 she left the hospital and since then her condition has remained stationary.

Examination:

Patient walks very slowly and with difficulty; her feet are kept apart, they drag on the ground and

with each step she leans her body very much over to the other side.

Patient said she could not walk 300 yards without resting and even walking 100 yards tires her very much. She complains of repeated attacks of cramp in the muscles of the feet and leg generally, which often come on every two hours day and night; she has to get out of bed and walk about or she could not stand it.

The muscles of both limbs are flabby.

Voluntary Movements: Hip Joint:

Flexion: Right leg, Not good.
Left " " "

She cannot lift either foot off the ground unless she leans very much to the opposite side.

Extension, R.: Weak. She cannot do the second part of the following: forwards lying leg flexion PP, raising PA.
L.: Rather weak. She can just manage to do the second part of that exercise.

Abduction, R.: Hardly any: she can just lift her foot off the other leg in side lying position.
L.: Fair, can raise her leg to form an angle of 20°.

Adduction, R.: Good.
L.: Good.

Rotation: External R.: Weak.
" L. Weak, she lies with her feet turned in.
Internal R.: Good.
" L. Good.

Knee Joint:

Flexion R.: Not good.
L.: Quite good.

Extension R.: Not good; she cannot in sit lying position extend her knee joint fully.
L.: Quite good.

Ankle & Tarsal Joints:

Flexion R.: Fair.
L.: Quite good.

Extension R.: Very weak, even the slightest resistance would prevent her doing this movement.
L.: Fair.

Eversion R.: None, the foot is kept inverted.
L.: Fair.

Inversion R.: Quite good.
L. Quite good.

The abdominal and spinal muscles are also weak. Patient cannot do sitting trunk extension and flexion PA, without a good deal of help, and has to be supported in stretch stride standing bending forwards PA, or she would fall.

No reflexes in either leg. No rectal or bladder disturbances.

Treatment:

(1) Reach grasp standing knee flexion and extension PA, sciatic nerve frictions PP.

(2) Ride sitting trunk flexion PR, extension AR.

(3) Ride sitting double arm abduction AR, adduction PR, nerve friction PP.

(4) Stretch stride standing bending forwards PA.

(5) Forwards lying running nerve frictions PP, length hacking PP.; forwards lying leg flexion PP, raising AR (or PA.)

(6) Sitting trunk extension and flexion PA. Sit lying knee extension and flexion PP, extension AR, flexion PR.

(7) Standing vertebral column stretching, AR at patient's head.

(8) Half lying leg rolling PP, flexion PA, extension PR.

(9) Half lying double foot rolling PP, flexion AR, extension PR; right and left foot eversion AR, inversion PR.

(10) Half lying stomach exercise PP.

(11) Side lying leg abduction AR, adduction PR; leg nerve frictions, PP.

Progress:

May 29th: No cramp in the night.

May 30th: Says she walks a little better.

June 1st to 7th: No cramp.

June 10th: A good deal of cramp.

June 11th: Cramp disappeared and did not return again.

June 15th: Walked 1½ miles, which took her about 2 hours to do. Extension of the feet better.

June 20th: Abduction at hipjoint better.

July 7th: Extension of right foot better, that of the left very good.

July 20th: Walked 1½ miles; it took 1½ hours there (partly uphill). Walked the same distance home. Took 1 hour.

August 15th: Abduction of left leg very good. Eversion of left foot very good, eversion of right foot somewhat better.

Aug. 20th: Walked 1½ miles (same place as before). Took one hour there. Walked home, took 50 minutes.

Sept. 15th: Left off treatment for 14 days, felt so strong that she took a situation as nurse-maid.

Oct. 1st: Returned to treatment, walks daily to and from where she lives, distance nearly 1 mile; took ½ hour each way to-day.

Oct. 22nd: Only took 20 minutes to walk here to-day.

Nov. 5th: She walks with a slight waddling gait; eversion of the right foot is not restored yet, but the movements of the left leg are practically normal. There is a slight patellar reflex on the left side.

Examination, December 20th, 1900.

Patient walks very much better; she can walk from her house to mine in 15 minutes. She only leans her body a little over to one side when walking. There is still a tendency for the feet to be dragged as she walks.

The muscles of the right leg are still flabby, but the left leg appears to be quite strong, the only weakness being in abduction of the hip joint and eversion of the foot.

Right Leg, Voluntary Movements:

Hip Joint:

Flexion: Normal.

Extension: Normal.

Abduction: Good, she can abduct it to an angle of 20° in side lying position.

Adduction: Normal.

Rotation, ext.: Not good.
Int.: Good.

Knee Joint:

Flexion: Normal.

Extension: Normal.

Ankle & Tarsal Joints:

Flexion: Good.

Extension: Fair.

Eversion: Fair.

Inversion: Good.

The abdominal and spinal muscles are much stronger. She can do sitting trunk extension and flexion PA quite well, without help. There is a patellar reflex on the left side, but none on the right.

Patient is continuing treatment under my colleague, Mr Harry Kellgren.

C. FACIAL PARALYSIS.

Case 1. J..... Å....., aged 7.

Came under treatment on August 12th, 1898, with complete facial paralysis of the right side. He had been running about very much on August 10th and while in a great state of perspiration he went and bathed. On the morning of August 11th his mother noticed that "his face was crooked". On August 12th it was still crooked and he could not move it. Patient was accordingly sent to me.

The right side of the face was smooth; there was lachrymation of the right eye, which remained open. There was no voluntary movement in the occipito-frontalis muscle in its frontal part, neither in the cheek or lower part of the face or lips. The mouth, when patient smiled, was drawn to the opposite side. The food collected in the right cheek when eating. The speech was not impaired. Taste and hearing normal.

Treatment:

Frictions on the facial nerve and its branches, and the patient was urged to try and move the face himself. Some general movements were given in addition.

Progress:

The first sign of movement came on August 20th;

the patient could smile a little on his right side. The occipito-frontalis could be wrinkled by August 22nd. The face was normal by September 10th, with the exception that the right eye could not close properly.

On October 6th the treatment was resumed by Dr A. Möller who cured the remaining eye weakness in three weeks.

November 1900, The face is quite normal.

Case 2.

Facial paralysis as forming part of bulbar paralysis. I have in one case restored the former in a case of the latter. See bulbar paralysis, pages 424 &c.

Case 3.

Facial paralysis as forming part of hemiplegia. (See case of Hannah Anderson, pages 383 &c.)

D. POST DIPHTHERITIC PARALYSIS

A case cured by this method has been described by Dr A. Kellgren in the Medical Press and Circular for 25th July, 1888.

Case 1. (From notes taken by myself and Dr A.Möller)

Maria G....., aged 13, was sent to me on Oct. 16th, 1899, with post diphtheritis paralysis. The history was that when 8 months of age she had scarlet fever and diphtheria, and convulsions. After that the paralytic symptoms were first noticed. Many medical men were consulted, who all said that the condition was one of post diphtheritic paralysis; but none of their prescriptions seemed to have any effect. The condition remained practically the same ever since one year of age, and now, on October 16th, 1899, 11 years afterwards, it was as follows:

The appearance is one of continually half laughing and the expression somewhat vacant. The mouth can only be opened about half way. The speech is nasal, although the palate is fairly movable. There is great difficulty in moving the tongue as the frenum linguae is much contracted. The tongue can only be protruded as far as the lower margin of the lower front teeth. She cannot lift the tongue

voluntarily. Salivation is very great in amount and continually running out the side of her mouth. Patient cannot pronounce l, t, n, at all and altogether the speech is very thick and at times almost unintelligible. Swallowing is impaired. Besides the above there is partial paralysis of the right upper extremity; the supinators and extensors of the forearm are very weak and the patient cannot oppose her thumb. Frictions on the brachial plexus ulnar nerves, etc. produce sensation only at the point of application and even that is diminished.

Treatment:

The special exercises were:

(1) Sitting head exercise, including throat exercise; and trigeminal, facial, lingual, and hypoglossal, etc., nerve frictions.

(2) Reach grasp standing head flexion PR, extension AR.

(3) Sitting right arm exercise, nerve frictions, &c.

(4) Stretch grasp standing drawing forwards PP, kidney frictions pp.

The patient daily had to practise protruding the tongue, saying the letters she had special difficulty in pronouncing, trying to breathe without letting the air escape by the nose, etc., in short trying to learn to do what she could not in consequence of the paralysis. Some general movements for the constitution were given in addition.

Progress:

Nov. 15th 1899. Less salivation; she can breathe without air escaping by the nose, swallowing is easier. The tip of the tongue can be placed against the upper front teeth. L, t. and n. can be pronounced fairly well and the speech is much clearer. Supination is better and she can open doors which open clockwise and need supination to perform the turning of the handle; she could not do so before on the same door. Extension of the fingers is better. The thumb can be opposed to the tip of the little finger.

Dec. 8th: The improvement continues. Patient was compelled to leave off the treatment for the time being.

Feb. 15th, 1900: Resumed treatment again. Speech has slightly improved during her absence and the extensors of the forearm are stronger.

March 15th: Treatment was again interrupted. The forearm has continued to progress this last month.

April 3rd: Resumed treatment again. Frictions on the brachial plexus, etc, even when not given strongly, cause sensation in the finger tips.

April 14th: Finished treatment. General condition is better, the saliva hardly ever runs from

the mouth, the speech is fairly clear and intelligible; she can pronounce d and t fairly well. She has begun to learn to write with her right hand and both supination and extension of the forearm are very good and she can do household work with both hands.

The total duration of treatment was about three months and one week. I firmly believe that further improvement, little short of complete cure would have resulted if she could have had the treatment uninterruptedly from the beginning and have continued it another few months. Unfortunately this was impossible.

E. BULBAR PARALYSIS.

Mrs H....., aged 52, began about two years before I saw her to find that speech caused her a little difficulty. This grew slowly worse and worse and then regurgitation of the food into the nose occurred. No cause for all this excepting that she became very weak and run down about two and a half years ago, in consequence of the death of one of the members of her family. Medical aid was not sought for some time, but as the symptoms got progressively worse, the speech and swallowing becoming more and more difficult, a medical man was consulted, who diagnosed bulbar paralysis. This diagnosis was subsequently confirmed by several other medical men including a specialist. In May 1898 patient was told that her condition was hopeless, and that nothing could be done for it. From then until March 1899, she had been trying massage, baths, etc., but all to no purpose; nothing seemed to have the slightest effect.

March 6th 1899: The condition was well advanced. The face was mask-like and expressionless, the mouth half open, the saliva ran from it continually. There was complete facial paralysis on both sides, the lips could not be moved; the lower lip hung down; speech

was almost gone. A few words like"Mama" could be pronounced with great difficulty; but otherwise her speech consisted of a few disarticulate sounds, and grunts. The tongue was nearly paralysed, only slight movements forwards and backwards could be done. She could not swallow the saliva unless very much accumulated in the back of her mouth. Only liquid food (eggs beaten up in milk) had been taken for some months past; the patient not daring to try and swallow anything solid or semisolid.

There were no fibrillary twitchings of the face, though some of the tongue were present.

The general condition of the patient was one of weakness. The arms were more affected than the legs: any communication the patient had to make was written by her. She could, however, only write slowly and with tremors in the arm, so that what she did write could only be read with difficulty.

On March 6th I commenced the treatment. On March 22nd some tremors were felt below the eye by the patient.

March 29th: Some movement of the facial muscles had returned in that area. She could swallow a little better and the word "Mama" could be pronounced a little clearer.

April 10th: Some tremors in the soft palate

were felt to-day for the first time. All the face muscles which were paralysed before have now got their movements back, though not to their normal extent yet.

April 20th: Movement in the soft palate commenced and can be seen. The food no longer regurgitates through the nose. The facial muscles are nearly normal in their movements, and the speech is slightly better.

May 23rd: The treatment had to be interrupted until July 1st. The improvement is still being maintained, though slowly. The soft palate moved better, the voice was better and tremors had begun in the larynx. The swallowing was a little easier. The saliva comes much less now. The general condition was stronger.

July 1st: The patient had gone back a little during the pause, and the speech had become worse again. The facial muscles, however, had not lost their tone or any of their power.

August 30th: The condition since July 1st is practically unchanged, if anything a very slight improvement has taken place, as the amount of saliva has diminished all this month. The relatives of the patient did not wish her to continue the treatment, as they thought it could not do her any good.

Against my advice and that of my colleague, Dr A. Möller, she went home. I heard during the course of the next six months that a change for the worse had set in, after on that the course of the disease was steadily downhill.

Patient continued to get steadily worse and her food had to be administered by means of a tube; in May 1900 she died from involvement of the respiratory centre.

F. DISSEMINATED CEREBRO SPINAL SCLEROSIS

I shall now describe a case of the above, which although not by any means typical, leaves I think but little question as to the true diagnosis. The case presented this peculiarity that the disturbance seemed very much more in the sensory areas than in the motor, hence the abolishment of the reflexes, which returned and were exaggerated when the improvement took place in the former.

Karl Johanson, aged 27, occupation tailor, came under the manual treatment on July 1st, 1899.

History:

He denies specific disease. No hereditary disease whatever. Patient says he has been somewhat nervous all his life, but it was not so bad as to prevent his going through compulsory military service some years ago. He definitely attributes all his symptoms as arising after a fall off a bicycle. The latter happened in May 1896, and in consequence of his machine slipping, he was thrown off and remembers getting a severe blow on his left side, which caused great pain in his head and in the left side. After that he lost consciousness. After a few minutes he regained his senses, but felt very funny. The accident happened quite close to his home and he walked

home the rest of the way (about 100 yards). He felt very shaken and peculiar for an hour on coming home, but then felt better again. He did not however get over it altogether and found when trying to bicycle again that he was shaky, had difficulty in keeping his balance, and had to ride in the middle of the road; if he rode at the side where the ditch was he had to stop or he would have ridden into it. He likewise found he had difficulty in walking and could not get along so quickly. He could not bicycle now at more than half his usual speed; it wouldn't go quickly.

His strength gradually began to leave him, and in the left leg pain began to be felt; this got worse and worse and he walked with still more difficulty, leaning over to the left side. Early in 1897 he found difficulty in keeping his balance when walking in the dark.

Early in 1898 he noticed that his legs began to shake when doing any movement requiring exertion and later on his left arm began to do the same. By August 1898 these tremors appeared when doing such ordinary movements as walking, and they had begun in his right arm and head as well.

About Christmas 1898 the patient began to experience waves of heat passing through his body and these were specially marked in his toes and hands.

After three weeks of this, waves of cold sensation came on and in time replaced the waves of heat.

His general condition progressed for the worse steadily and an attack of Influenza in March 1899 made him very much worse in a few days. Up to then he had been able to do a good deal of work (though nothing very fine) but had to stop now. Great pain in his legs began and he shook very much when walking or moving his legs.

He sought medical advice after that and got electricity for seven weeks from the beginning of April to the end of May 1899. This,however, made him still worse. At the end of the time his physician told him he had spinal cord disease and was incurable.

Patient then went to the head medical man in Jönköping, namely, Dr Engstrand, who diagnosed disseminated cerebro-spinal sclerosis and told patient that his only chance was to try Kellgren's treatment. He therefore came to Sanna (where Dr A.Möller and myself were practising)

Examination, July 1st 1899.

Patient walks with great difficulty: he cannot get along with^out the help of a stick. He keeps his feet wide apart, the lines described by his heels being about 1½ to 2 feet apart, his knees as straight

as he can keep them and his trunk forwards, with his eyes fixed on the ground. His legs jerk to and fro (volitional tremors, or rather jerks) when he walks, and his head nods continually. He often reaches with the other hand which is not holding the stick for support from chairs, tables, etc.; volitional tremors can be seen in both arms.

The speech is slow, monotonous, and syllabic; his face moves but little when he speaks, and there is nystagmus when he looks at a fixed object.

Sensory functions: Patient complains of a feeling of cold in his body; which occasionally seem to pass over him in waves. There is a feeling of cotton wool under his feet; this has been present since May 1899. There is not very much pain: when present it is located to a region in the lower limbs corresponding to the external cutaneous nerve. There is continual headache. The muscular sense is diminished.

Eye Symptoms: Patient complains that objects continually seem to dance in front of him, then there is a pause and then they dance again. Nystagmus is present. The left eye reacts less to light than the right one. The reaction for accommodation is fairly good. Patient has not much difficulty in reading, though the print dances a little.

Hearing, taste and smell normal as far as he could judge.

Motor functions: Swallowing normal. Micturition, there is difficulty in starting the stream, and patient sometimes has to try 5 minutes before he can get it to start. There was also some difficulty in keeping the urine. This was first noticed after the electricity treatment. In the case of difficulty in starting the stream, when it did begin it came first in drops. Defaecation: There is a motion every two days; occasionally 3 days elapse, and there is difficulty also in getting it to start. Reflexes: No clonus; patellar reflex slight on the right side; on the same side there are cremasteric and abdominal reflexes, but only slight. None of these are present on the left side.

Voluntary movements: The walk has been described. All voluntary movements are accompanied by volitional jerks or tremors, which cease when the former cease, and which are exaggerated in giving duplicate movements. Patient could eat with knife and fork until April, but gave it up as he couldn't get the food to his mouth and could not cut it. He now eats with a spoon and can only use his left hand for doing so. Sewing: he can hardly sew at all, as the fingers of his left hand move over one another in a rubbing kind of way when

trying to do so; he cannot even hold a needle in his right hand.

Coordination. The Romberg symptom is present, the patient swaying for a few seconds first. With the eyes kept open he sways a good deal, but does not fall. He cannot walk in a straight line, but deviates considerably. With his eyes closed he cannot bring his finger tips together. He writes with his left hand with difficulty; specimens of his writing in September 1898 is shewn in fig. 256 (p. 449).

Vasomotor and Nutritive Functions: Patient is very thin. He weighs 59 kilos. in ordinary clothes.

Cerebral and Mental Functions: His memory is not so good as it used to be. The speech has been described; on being asked to protrude the tongue, he does so with jerks of that organ and it is seen to tremble, specially round the edges.

Locomotory System, etc. Has been described. There is a C. shaped scoliosis with the convexity to the right, and the right shoulder is higher than the left.

The sexual power has been weak for a year or more and since April of this year it has been quite lost, not even an erection taking place on sexual excitement.

Treatment:

Patient was treated from July 1st to Sept. 30th as follows:--

(1) Reach grasp standing knee flexion and extension PA, with sacral beating. PP.

(2) Stretch grasp standing drawing forwards PP, followed by vibrations over the bladder.

(3) Loin lean stride standing trunk rotation AR, ringing PP.

(4) Forwards lying running nerve frictions PP, length hacking PP,

(5) Stretch side lying running nerve frictions PP, leg abduction AR, adduction PR.

(6) Heave grasp standing, Chest clapping PP. side shaking PP.

(7) Stretch stride standing bending forwards PA.

(8) Neck firm stride kneeling sitting down PA, raising AR.

(9) Standing vertebral column stretching with AR at the head.

(10) Half lying stomach exercise. PP.

On September 30th 1899 patient left saying that he would come back in three days. (He did not however do so until December 13th). No systematic examination was made therefore. Patient however told me afterwards that he improved during the time of treatment; he could walk easier and did not need to use his stick so much. He could even walk a few yards without it. He says that the jerkiness on voluntary movement was not so well marked.

On December 13th the patient returned to continue the treatment. He was in every respect worse than when he left in September 30th. Owing to temporary illness on my part I could not make the examination until January 1900. During that time however, the treatment was given by my colleague, Dr A. Möller.

Examination:

Patient is already better than on December 13th 1899; he says that three days after leaving off in September 1899 he began to feel worse, walk worse, etc.; he got steadily worse until December 13th; his condition then remained stationary for two days, then he felt better again. From December 24th to 26th he got no treatment and he felt he was getting worse on the 26th. Since then, undergoing the treatment all the time, he has progressed steadily.

The walk is much worse; patient has great difficulty in walking at all, even with the help of a person on one side holding him up and the use of a stick in the other hand. Patient is lodging at a house about 200 yards from my own, and to walk that distance took at least ten minutes. In case of windy weather, patient had frequently to stop or he would have been blown over, so bad was his ability to balance. Indoors he walked with his feet wide

apart, his arms were spread out and caught hold of doors, tables, chairs, etc. to balance himself with, and his whole body shook very much. Patient walked chiefly on the whole flat of his foot, and lifted his heel as little as possible.

The speech was still slower, more monotonous and monosyllabic, and the corners of the mouth twitched.

Sensory functions: Patient has been having severe lightning pains in his arms and head, and lower limbs, specially the latter. He has continual headaches, which were very bad indeed in December before he came; he could hardly see at all, they were so bad. There is impaired sensation in the feet and the patient feels continually as if he were walking on cotton wool. When getting forwards lying running nerve frictions he feels as if they were being given through a blanket which deadened them. There is a continued feeling of formication in the upper dorsal region and in the pectoral muscles. The mouth and nose feel numb; there is considerable anaesthesia of the face; on pinching hard the skin in that region very little sensation is produced. His feet and legs always cold. There are no sensations in the feet on giving popliteal nerve frictions and none in the spine on giving cervical nerve frictions. There is consider-

able diminution in the muscular sense.

Eye Symptoms: Nystagmus is very well marked and patient says that objects dance more now than they used to. The right eye reacts very little to light and the left not at all; the reaction of both to accommodation is not good. Patient can hardly read at all. He has no achromatopsia, although he has not been clever at telling colours all his life. He can distinguish colour quite easily, however, and says his illness has not affected it. There is no diplopia or ptosis, because of the nystagmus.

Taste is not so good as it used to be; hearing and smell are normal to all intents and purposes.

Motor functions. Micturition: There is difficulty in getting the stream to start; patient often tries eight minutes without success, and then he stops and tries again. When he does succeed, the stream only comes in drops at first. He has incontinence sometimes, although he always feels it coming on. When it does he has to find a suitable article to empty his urine in, or else he would do so in his trousers. Defaecation: Rectal evacuation comes on now about every 3 days, occasionally 4. There is considerable difficulty in getting the motion to start, often 15 minutes having to be expended first in trying.

Reflexes. No patellar, abdominal, or cremasteric reflexes on either side can be obtained. No clonus anywhere.

Voluntary movements: The volition jerks are much more marked. The gait has been referred to. In riding trunk flexion PR, extension AR, patient jerks very much indeed; his head jerks forward six inches and backwards three, forwards and back again and so on, and his gluteal region is lifted off the bench each time from 3 to 6 inches. About half way through the first part of the exercise patient loses his balance altogether and has to put out his hands to catch hold of the bench to support himself. Patient has to be supported when trying to do stretch stride standing bending forwards PA. Movements implying flexion of the knee joints can hardly be done at all, the patient usually violently flexing and extensing his knees a few times and then having to straighten them again or he would fall. An attempt to do reach grasp toe standing double knee bending PA, resulted in the patient falling almost at once. In all movements of resistance the whole body jerked very much.

Eating: He feeds himself with his left hand with a spoon, and has to bend his head forward to get the spoon to come to his mouth. If he did not, the jerks of the left are so great that he cannot bring his spoon up to his mouth. Even when bending his head forwards, often the contents of the spoon are spilt.

He cannot sew at all, and when trying to cut out the scissors wobble about so that he cuts all wrong.

With eyes shut and feet together he falls at once, with eyes open and feet together he sways for a second or so, and then falls.

He has great difficulty in writing, as he can hardly hold a pen, his fingers move so much.

Vasomotor and nutritive functions: Patient is very thin and the joints are very supple. When sitting on the floor with his knee joints fully extended he can bend his body forwards, so that he can kiss his knees.

Cerebral and Mental Functions: His memory is worse than in July. His speech has been described. He slept very badly in November, but sleeps all right now. There are no volition tremors when trying to go to sleep, though when sitting still the head nods to and fro continually.

Spine: The scoliosis is better and the shoulders are the same height.

Pulse when sitting down 52 per minute.

Treatment was about the same as before, with the addition of sitting head exercise PP.

Progress:

February 13th, 1900: Volition tremors not so great. Patient walked up a flight of 15 steps in my house, holding on to the bannister on both

sides; it was difficult for him to do so, but he managed it. He says he could not have done this two months ago. The walk is better. Sensation in the feet is now felt on popliteal nerve frictions.

March 13th: With feet together and the eyes shut he sways for a few seconds before he falls. The volition tremors are slightly less. Can sew a little and cut out a little.

April 12th: He does not fall at all with his feet together and his eyes shut. Rectal evacuation has come almost daily this last month; there is not so much difficulty with urination. Frictions on the cervical nerves cause slight feelings down his spine. Volition tremors considerably less.

April 20th: Patient has made very much progress these last three weeks as regards his walk. On April 18th he moved to Huskvarna, a town near by and has walked to and from my house once daily, the distance between his house and mine being about two thirds of a mile.

Patient during the time he has been under treatment has occasionally, every fortnight or so, had a very bad headache, lasting from two to five days. At the conclusion of the headache, his improvement was quicker for the next few days. Thus he had a

rather bad attack just about April 1st before he made the considerable improvement between then and April 20th.

May 5th: He says he has not walked as well as to-day for the last 15 months.

May 15th: An attempt to get him to do reach grasp toe standing double knee bending PA failed; he jerked up and down violently two or three times, and then would have fallen if I had not helped him up again.

May 24th to 27th: Bad headache.

May 28th: Some fever to-day.

May 29th: He says that he was able to-day to stand on one leg while putting on his trousers; he has not been able to do this since February 1898.

June 8th: His walk continues to improve. His headaches are less; he could do reach grasp toe standing double knee bending to-day, although it was very jerky.

July 15th: His headaches are still less; he has not felt as well as this for over two years.

August 10th: His right hand is so well that he is able to use it for sewing purposes to do his

tailoring with; and when cutting out, the scissors do not wobble at all.

September 14th: Patellar reflex on left knee has returned slightly. Cervical nerve frictions can be felt right down the whole of the spine quite well, and when getting a new exercise, added about two months ago, viz. stretch half lying, double hand and foot nerve frictions PP, he feels a sharp sensation through the whole of his body.

The treatment has changed gradually and is now as follows:--

(1) Sitting head exercise PP.

(2) Reach grasp standing knee flexion and extension PA, sacral beating PP.

(3) Stretch grasp standing drawing forwards PP, intercostal nerve frictions and bladder vibrations PP.

(4) Head lean arch standing toe raising, breathing PA.

(5) Forwards lying running nerve frictions, length hacking PP.

(6) Ride sitting trunk flexion PR, extension AR.

(7) Heave grasp standing chest beating PP, side shaking PP.

(8) Stretch half lying double hand and foot nerve frictions, PP.

(9) Side lying running nerve frictions PP. leg abduction AR, adduction PR,

(10) Half lying stomach exercise PP.

(11) Stretch stride stand bending forwards PA.

Oct. 20th: Nystagmus only very slight. Patient can walk, when not windy, as quickly as any ordinary person. He does not jerk so much when doing his movements. His arms jerk very little. Two days ago he left off eating with a spoon, and now does so with knife and fork. The tongue trembles at the edges, but does not jerk when he protrudes it.

Nov. 6th: Objects do not dance in front of him any more, excepting slightly when reading, when the lines seem to wobble a little. There is no nystagmus.

Dec. 3rd: Slight knee clonus on left side, none on right. Some ankle clonus on both sides. Patellar reflexes: left normal, right not quite normal.

Examination: Dec. 20th, 1900

Patient walks much better; he walks from his house to mine daily; this takes him 15 to 20 minutes, the distance being about 2/3 of a mile; even when it blows hard he can get along fairly well. He prefers walking with the aid of a stick, though this is by no means a necessity. When walking, he places his feet fairly well in front of one another, the line described by his heels being about four inches apart. With the help of a stick he can place his

feet when walking so as to describe one and the same straight line. He cannot walk well in a straight line without a stick. He now bends his knees when walking and lifts his heels off the ground. Some slight volitional jerks are seen in his legs, none in his arms, when walking.

The speech is quicker, more lively and he raises his voice and drops it, and, generally speaking, talks like an ordinary person.

Sensory functions: No lightning pains; pain however is often felt in ankle joints, lumbar region, side of abdomen and calves. Headache is much better. For the last three weeks or so great waves of heat have been passing over his body, just like similar ones in 1898, as already mentioned. Feet and legs are always warm now. There is sometimes a feeling of formication in the back of his head, fingers and heels. There is no numbness or anaesthesia. The fifth nerve appears normally sensitive. There is a slight feeling of cotton wool under the feet, but nowhere else (he feels this when he gets his treatment). The muscular sense is quite good. Sensations in the whole body are felt on getting stretch half lying double hand and foot nerve frictions PP, and on getting cervical nerve frictions.

Sensation in the feet on sciatic and popliteal nerve frictions. Sensory nerve conductivity generally seems quite good. No nystagmus; he says objects do not dance at all in front of him, nor do the lines of a newspaper when reading, unless he is very tired or has a bad headache. The pupils react fairly well to accommodation, but little to light. There is no difference between the two pupils.

Taste is normal again.

Motor functions: Swallowing normal. Micturition: this is now normal; there is never any symptom of incontinence or retention; the stream starts at once when he tries. Defaecation: there is no difficulty in getting the motion started; there is an evacuation usually every day, occasionally every other day.

Reflexes: Patellar, left exaggerated, followed by several jerks at knee joint and ankle joint; right, present but not quite to normal amount. Ankle clonus present on both sides equally; about 3 or 4 jerks are given, then it ceases. Knee clonus left side, one or two jerks are felt; right side, there appears to be the beginning of a jerk, but very slight. No epigastric or abdominal reflexes. Frictions over the internal plantar nerve if given hard

cause flexion of the thigh and knee similar to what happens in lateral sclerosis.

Voluntary. When sitting still, the head does not nod at all; it does so very slightly when patient walks quickly. There are no jerks in the arm when he holds it out at right angles; the fingers remain almost immovable. When giving a strong duplicate movement a few volitional tremors can be felt in the arms. When getting ride sitting trunk flexion PR extension AR about 20 small jerks are given, each one bringing the patient back about ½ to 1 inch; there is no tendency to fall or lose his balance. He can do stretch stride standing bending forwards PA quite well, by himself. The only movements that cause much jerking are those which entail movements of the quadriceps extensor cruris, and the exercise head lean arch standing toe raising breathing PA.

When he stretches out his tongue there are no jerks, but fibrillar twitchings along the edge. Patient eats with knife and fork quite well. He can sew with his right hand. Patient can whistle and smack his lips. When speaking his face moves normally.

Patient can walk fairly well in partial darkness. With eyes shut and feet together he sways a good deal, but does not fall. With eyes shut and feet at right angles he sways somewhat. The walk has been describ-

ed. With arms spread out and one foot off the ground he can balance for a second or two without falling.

Specimen of his handwriting is shown herewith (fig. 257.)

Patient says he feels much stronger.

Vasomotor and Nutritive Functions: Patient is still very thin. Weight 61½ kilos. He has been perspiring very much at night for the last three weeks, ever since he began to experience waves of heat passing over him, as mentioned.

Cerebral Functions: Memory has improved this year. He sleeps very well. Speech is almost normal; it has been referred to.

Locomotory System: The spine is straight and no curvature can be seen.

Pulse when sitting down 74 per minute.

Erections of penis often come on; he has not yet attempted coitus.

Patient is continuing the treatment under my colleague Mr Harry Kellgren.

On March 5th I again saw the patient. He has continued to improve. The pupils react both to light and accommodation, better to the latter however. There are no skin reflexes. Deep reflexes: patellar, left, normal; right, less than normal. Ankle clonus: a very little on both sides. A little knee clonus

Beställningar
å allt hvad till
Skrädderiyrket
hörer
emottagas och utföras
fort, väl och billigt.

Jenhult den 2 6 Sept 1898

C. P. Karlsson Tygarp Debet

till

Ludvig Johansson.

En kostym		21 00
	Kvar	21 00

Fig 256.

449.

Dec. 20th 1900

Karl Johansson

Fig 257.

Specimens of handwriting. Sept 25th 1898 (Fig 256).
Dec 20th 1900 (Fig 257).

on the left side.

On April 4th, Mr Harry Kellgren writes to me: "Patient walks better; can run alone for about 7 or 10 steps. He can do

Ride sitting falling backwards, breathing PA.

Head lean arch standing, toe raising PA.

Stride kneeling, sitting down PA, raising AR.

Lying double leg flexion extension, PA.

perfectly steadily, without assistance and without the shaking which he had before. There are no cutaneous reflexes; the knee jerks are as above. (p. 448). There is no ankle clonus. Pupils react to light and accommodation."

G. NEURALGIA.

I have in several instances produced immediate and permanent relief in quite fresh cases of supra-orbital, ulnar and occipital nerve neuralgia, which came to me within 24 hours of ~~the myalgias~~, the first manifestations of the symptoms. The treatment was, locally, vibrations or frictions over the affected nerves.

Case 1. (From notes taken by myself and A.Möller, M.D.)

Mr S....., Engineer, aged 22, came under treatment on February 24th, 1900. The history was as follows: on Feb. 14th he caught a cold, and great pain in the right side of the forehead was felt and this got worse and worse. On Feb. 17th the other side of the forehead was involved. The pain was constantly there, and on 19th patient consulted a medical man who prescribed rest at home for a week and antipyrin. On February 24th as his condition had been getting still worse, patient sent to Sanna.

On arrival, the patient complained of severe pain in the forehead which was intensified by a light friction on the supraorbital nerves. He felt it more in the left side.

Treatment:

Vibrations over these nerves and a few general movements. Patient felt much better after it and there was much less pain.

Next day, February 25th, patient walked to my house . He stated that one bad relapse of the pain had come on last night, and lasted 20 minutes, otherwise he had felt better all the evening. There was now some pain in the left supraorbital nerve, which however, disappeared entirely during the treatment (which was practically the same as before).

February 26th: Very slight pain in the nerve of the left side. Treated for the last time.

July 20th 1900: No relapse of any kind whatever has taken place.

Case 2. (From notes taken by myself & Dr A.Möller)

Miss T ....., aged 23, school mistress, came under treatment on October 13th, 1899.

Patient had influenza in February 1899 and ever since then when teaching had had violent attacks of neuralgia in the supraorbital or lateral frontal regions, with headache all over the head and much pain in her eyes. These attacks generally came on after she had been working about half an hour and lasted

sometimes all day, i.e. from 9 a.m. to 5 p.m., at which hour school finished; sometimes they lasted all the evening as well. The general condition had become weakened and the patient was nervous.

On examination the supraorbital and great occipital nerves were very tender to the touch; the head felt hot. The patient was very sensitive over the whole body wherever I touched her.

Treatment commenced on October 13th. The special movements prescribed were:--

(1) Sitting head exercise, with vibrations over the affected nerves and the eyeballs. PP.

(2) Reach grasp standing head flexion PR, extension AR, followed by cervical nerve frictions. PP.

(3) Forwards lying running nerve frictions PP, length hacking PP.

(4) Stretch grasp standing drawing forwards PP, kidney frictions PP.,

besides which some other general movements were given.

Progress:

Patient could not leave off her teaching and went on daily as usual.

October 25th: Neuralgia less intense.

October 26th: Only one attack of neuralgia which lasted half an hour to-day.

Nov. 2nd: No attack at all yesterday. Headache has been better.

Nov. 9th: No headache at all to speak of the last week.

Nov.11th: Patient considered herself practically cured.

August 1900: After very hard work a slight pain is occasionally felt in the supraorbital region, otherwise patient has kept quite well since the treatment was finished.

H. MENTAL OVERWORK.

Miss H....., aged 32, had been working very hard (mentally) for some months as schoolmistress.

For three weeks past felt progressively weaker. On 21st April, during morning and afternoon she had about 10 distinct attacks of a peculiar nature; she suddenly could not see any more and felt as if she were being lifted up and thrown down on the ground. A few seconds later she could see again and was surprised to find that she was still standing up. Great heat and heaviness in the head accompanied these attacks and in the intervals; there was considerable difficulty in walking, as her legs felt shaky. Palpitation every now and then. On April 22nd, she woke up, having slept very badly. She felt very weak and there was commencing sensation of sickness. Being Sunday she did not need to go to school. Became a little better during the course of the day, as she was able to keep quiet. On April 23rd she went to school again and just managed to get through her work. Sensation of nausea and sickness worse. Appetite good, however, and she usually felt better after eating. On April 24th she again went to school, but felt so bad that she had to lie down soon after arriving on a sofa in the teachers' room, and was driven home later on.

Patient is of a somewhat nervous temperament.

Examination:

April 24th. Patient looked thinner than when I saw her 14 days ago, and looked somewhat anaemic, complained of weakness, headache and feeling of heat in the head, unpleasant sensations in epigastrium. Patient stated that she was totally unable to read and the very idea almost was unendurable.

The head was very hot, specially the occipital region. Palpitation at intervals during the day.

Treatment:

(See April 25th) After it patient felt better and slept very well during the night.

April 25th: Patient unable to do the slightest attempt at reading. Treatment once a day and henceforth as follows:--

(1) Sitting head exercise PP.

(2) Forwards lying running nerve frictions PP, length hacking PP.

(3) Ride sitting trunk flexion PR, extension AR.

(4) Ride sitting double arm abduction AR, adduction PR, nerve frictions PP.

(5) Ride sitting alternate rotation AR. (later on ringing PP. added).

(6) Stretch stride standing bending forwards PA.

(7) Half lying leg rolling PP, flexion PA, extension AR.

(8) Sitting trunk extension and flexion PA.

(9) Half lying stomach exercise PP.

After treatment to-day she was rather giddy all the evening (time of treatment was 5 p.m.) until 11 p.m. when she retired to bed and slept well.

April 26th, 27th, 28th, 29th: Treated. Improvement in all respects.

April 29th (Sunday) Very well indeed.

April 30th: Felt very weak, but head rather well.

May 1st: About the same. Slept badly.

May 2nd: Patient felt very well, and the class at school came to her house and got an hour's instruction.

May 3rd: Patient very well. No class to teach to-day, as work was done by others.

May 4th: Drove to school; gave 1 hour of instruction; walked home again (Distance 15 minutes walk).

May 5th: Walked half way to school, drove the rest. 1 Hour's work. Walked home.

May 6th: (Sunday) Treated. Feels almost well. Palpitation inthe evening.

May 7th: Walked to school and back. Four hours' teaching. Head quite well however, but easily gets tired.

May 8th: Rather tired after yesterday's efforts, Head same as yesterday. Occipital region not so hot by a long way as on 24th; one can feel it gets better day by day.

May 9th: About the same as yesterday. Four hours at school.

May 10th: Slept beautifully last night. Walked to school quite easily. Felt very well and did her four hours' work with ease. Tired in her head in the afternoon. This disappeared after treatment.

May 11th and 12th: Treated both days. School both days; on 12th (Saturday) felt tired, but revived during afternoon.

May 13th: Not treated. Very tired all day.

May 14th: Treated. Diarrhoea early in the morning and night; after it patient felt better than on any occasion since her illness.

May 16th, 17th, 18th, 21st, 23rd: Very well indeed all this week. Treated once daily.

May 25th & 28th: Treated.

May 29th: School finished for the term.

June 1st & 2nd: Treated. Very flourishing.

June 5th, 6th, 8th, 9th, 11th, 12th, 14th, 15th Treated. Very well indeed.

June 15th: Treatment finished.

I. SEQUELLAE OF INFLUENZA.

(From notes taken by myself and Dr A. Möller, M.D..)

Mr J ....., aged 39, coachman, came under treatment on November 19th, 1899. The history was as follows: patient drinks a good deal. In March 1899 he had an attack of influenza and got up too soon. Since then he has continually been having pains in his head and body generally which move about. He has an attack of giddiness sometimes, and buzzing sounds in his head. General nervousness and weakness; he is shaky on his legs. Appetite has been fairly good all the time; but both taste and smell are deficient.

The condition has persisted pretty well unchanged until now in spite of various remedies he got after consulting various medical men.

Nothing particular could be elicited on examination, except that the back of the head was hot to the touch.

Treatment:

(1) Sitting head exercise, ear vibration PP.

(2) Reach grasp standing neck bending PR, extension AR, followed by frictions on the cervical nerves.

(3) Heave grasp standing chest clapping, side shaking PP.

(4) Forwards lying running nerve frictions, length hacking PP.

(5) Half lying double foot rolling PP, flexion and extension AR.

(6) Stretch grasp standing drawing forwards PP, kidney frictions PP.

(7) Stretch stride standing bending forwards PA.

(8) Half lying double leg rolling PP, flexion PA, extension AR.

(9) Half lying stomach exercise PP, spleen frictions, etc. PP.

Progress:

Nov. 20th: Feels easier in his head

Nov. 28th: Feels still easier in his head.

Dec. 2nd: No pains in body; some buzzing sounds in head, otherwise well.

Dec.16th: Left off treatment until Jan. 4th Smell and taste have come back again; practically normal.

January 4th, 1900: Returned to treatment, as pains in his body had recommenced.

Feb. 7th: He occasionally feels giddy (this however may be due to the alcohol he takes) otherwise normal. Treatment finished.

October 1900: Still keeping quite well.

J. CHRONIC HEADACHE.

Mrs C....., aged 38, came under treatment on November 1st, 1900. Her history was as follows; ever since the age of 15 up to the present day she has suffered from continual headache. Sometimes there was a few days' intermission, but as a general rule they were there continually.

The usual course of the headache was as follows: On waking up, there was not much. After getting up a slight amelioration might occur; then usually there came on an acute attack; in about 2 minutes there would be violent pains in the back of the head; this would spread over the vault of the skull and settle there as well, then the temples and eyes would be affected. Usually the patient would be so bad that she could not even read. During the course of the afternoon the pains would subside somewhat. In the evening the pain would often get worse again.

Patient has suffered from cold feet continually and sleeps badly. Movement and exertion usually aggravated the condition, mnetal worry nearly always did so.

At mealtimes there was if anything a slight improvement.

Treatment:

The treatment consisted chiefly of exercises to

further the circulation and to draw blood away from the head, as follows:--

(1) Sitting head exercise PP.

(2) Reach grasp standing head flexion PR, extension AR, followed by cervical nerve frictions PP.

(3) Ride sitting double arm abduction AR, adduction PR, and nerve frictions PP.

(4) Half lying double foot rolling PP, flexion and extension AR.

(5) Forwards lying running nerve frictions PP, length hacking PP.

(6) Stretch half lying double arm rolling PP, double elbow flexion AR, extension PR.

(7) Sit lying knee extension and flexion PP, extension AR, flexion PR.

(8) Heave grasp standing chest clapping PP, side shaking PP.

(9) Half lying leg rolling PP, flexion PP, extension AR.

(10) Half lying stomach exercise PP.

Progress:

Nov. 8th: Headache has been getting less and less this week. None at all to-day.

Nov.14th: No return of the headache until this evening.

Nov.15th : No headache.

Nov.16th: A little headache to-day, as she worked very hard last night.

Nov.17th: No headache.

Nov.28th: No headache since Nov.17th. Feet and legs are continually warm now. Patient says she feels very well. Treatment finished.

CHAPTER IX.

DISEASES OF THE LOCOMOTORY SYSTEM.

A. RHEUMATISM.

Mr K..... N..... , builder, aged 40, came under treatment on Nov.9th, 1900, suffering from a mild acute attack following on chronic rheumatism. The history was as follows: patient thinks he first began to suffer from rheumatic pains about five years ago; he cannot ascribe any cause to this, such as fever, undue exposure, &c. Since that time he has been suffering from pains in the shoulders and arm generally, back and hip joints; these came and went and caused him to become stiff in the joints affected, with difficulty and pain on movement at first, although a good deal of movement relieved the condition for the time being. He was never very bad with it and never had to stop in bed. He had never consulted any medical man and never taken any internal or external remedies. The rheumatic symptoms were absent during the warm months in the summer time, but always returned in September or October and remained until the following summer.

The present attack began as follows: on Nov. 8th patient got very hot over some work and in walking home he thought he caught cold. For the last week he had been suffering from rheumatic pains in his left hip and right shoulder, and this got very much worse in the course of the night; he slept very badly, perspired a good deal and said he had some fever. The next morning he had pains in his back, both arms and both hips, specially the left. The latter was so painful that it prevented his walking.

Patient was driven from his house to mine, distance 2/3 mile on November 9th. Patient walked with the help of two sticks and tried to use his left hip as little as possible. He complained of much pain in that joint, the spinal muscles and both shoulder joints. Pressure over the hipjoint caused much pain and so did a blow on the foot with the patient lying down and his knee joint extended. The pain in the affected joints got very much worse when I moved them. There was no fever, pulse 88 when lying down.

I gave patient vibrations over the joints which were most affected, and then passive movement at all the joints of the whole body. I could not have done this at the hip joint without using traction of the

femur away from the pelvis. Beginning gradually I at last after 10 minutes or so could give passive leg rolling with very little pain to the patient. I then gave him other joint movements, stomach exercise and kidney frictions, forwards lying running nerve frictions PP, etc. Patient was so much better that he could walk home.

Nov.10th: General condition better. No pain except in left hip. Treatment same as before; better after it.

Nov.11th: Not treated.

Nov. 12th: No pain in left hip or anywhere else.

Nov.15th: Finished treatment. No rheumatic pains anywhere.

On evening of 15th, patient worked out in open air in cold weather and was wet through with perspiration. No bad effects however.

December 18th, 1900: Still without any pains anywhere.

March 1901: No return whatever of the pains.

B. VIOLENT SEIZURE (RHEUMATIC ORIGIN?) WHILE BATHING.

Anderson, factory worker, aged 35, had been suffering from chronic rheumatism for a year. Two months ago he was operated on for haemorrhoids and since then had not felt very well. On July 19th 1900, he went to bathe. Suddenly he felt a kind of cramp in his feet and he remembers feeling it passing up his whole lower extremities and on to his abdomen. He felt he was falling and screamed for help. After this he remembers nothing more. The friends of the patient told me that they saw him fall back into the water and disappear entirely from view and about five minutes elapsed before they got him out. When they got him out he was in a state of rigidity with cramp in the episthotonic position. They tried to perform artificial respiration.

At 5.45, fifteen minutes after the accident, Mr Harry Kellgren and I were on the spot. The man was blue in the face, his breathing was laboured, and sterterous; there were continued clonic movements of the head to the left side; every now and then the eyes would open and I saw the pupils were both widely dilated. There was, however, profound unconsciousness. Occasionally spasmodic movements of the lower limbs were seen and the patient at fairly reg-

ular intervals of a few seconds screamed aloud, something like a cry in tubercular meningitis. Pulse imperceptible.

We immediately performed artificial respiration together with cervical and other nerve frictions; the breathing became less laboured, but the movements of the legs increased and spasmodic movements of the arm had commenced. The movements of the head now were on both sides, not only to the left as before.

The treatment kept up was stimulatory, consisting of nerve frictions, chiefly given in several places at once, and artificial respiration. I now noticed that the left pupil, when he opened his eyes, was larger than the right.

At 6.45 patient still unconscious, but still screaming at intervals and the spasmodic movements continued. We took him to a house and sat him up. Every few seconds the man would rise on his feet with a scream and become opisthotonic; this lasted a second or two and then he would collapse into the chair again. I also noticed a wrist drop in the right hand; it disappeared in about 40 minutes. The treatment was continued all along.

7.30: Somewhat quieter, pulse very weak, very small, very quick (it could not be counted), very irregular. Patient was driven in a carriage to his

house and on the way he continually became opisthotonic or sat up for a few seconds, screaming as before, then collapsing again.

8.0: We sat him in an arm chair. Spasms of body and extremities getting less, but continued movements of head; less screaming however. Treatment now was chiefly directed to drawing blood away from the head.

9.0: Faint gleam of returning to consciousness.

10.0: Patient fairly quiet; but heart bad and beating feebly or irregularly.

11 p.m. Man quite quiet. Heart very bad, 136 per minute, irregular and beats being missed. The treatment since 9.30 has been chiefly heart vibrations and shaking.

It was necessary to give treatment over the heart continually; if it was stopped, the heart got very irregular and it had to be resumed at once. From 9.30 p.m. to 1 a.m. the heart could not be left alone for more than 5 minutes, or it gave signs of stopping at once. The respiration was laboured and many bubbling sounds were plainly heard at considerable distance (even 10 feet away in the room adjoining.)

12 midnight: Heart treatment gradually being stopped. Heart better, 126, more regular.

12.15 a.m. Pulse 120, Still very weak.

July 20th: 1 a.m. Pulse 116, weak, more regular, Patient opens his eyes when his name is called very loudly.

2 a.m. Pulse 108; heart treatment only given every few minutes for a minute or two. Patient trying to speak. Put to bed (he had been in arm chair till now)

2.30 a.m. Man has turned over in bed twice by himself. Treatment of heart only given very occasionally.

3.0 a.m. Pulse 100, regular; patient recognised his wife.

3.30 a.m. Patient suddenly violently sick, vomiting up coffee coloured stuff, and recovered consciousness; he could answer questions. He remembered nothing since the accident and wondered what I was doing there.

4.45 a.m. Patient quite rational. Pulse 85, strong, regular. I left the patient and went home.

In the afternoon I saw the patient again. He is weak and sore where he got treated, but otherwise fairly cheerful. I gave some movements for the lungs and heart.

July 21st: Appetite normal and patient went for a short walk. Treated once.

July 22nd. Treated at home. Feels very well; better than before the seizure.

July 23rd: Walked to my house and back (distance about 1 mile each way). Complains of pain in left toe and shoulder - he has had chronic rheumatism for nearly a year.

Treatment:

The treatment was movements of all his joints, such as

(1) Half lying double arm rolling PP, flexion AR, extension AR.

(2) Half lying double leg rolling PP, flexion PA, extension AR.

(3) Half lying double foot rolling PP, flexion AR, extension AR.

with movements for his respiration, etc.; also stomach exercise, kidney treatment, head exercise, etc.

The pains in toe left him after a few days and after settling in the other joints for a bit, finally disappeared.

On July 23rd he went back to his work at Husqvarna factory. On August 23rd he finished treatment, feeling very well indeed, much better than he had felt for years, and had got rid of a slight chronic catarrh of the lungs from which he has suffered all his life. No rheumatic pains at all during the last ten days.

December 1900: Still keeping very well.

C. SPRAIN OF THE GASTROCNEUMIUS MUSCLE.

Lieutenant E.C.H., student at the Central Gymnastic Institute was on October 13th 1898, after having done an hour's pedagogical gymnastics, seized with sudden pain in the left calf. The condition got worse, and the day afterwards he noticed that there was considerable swelling over the middle of the calf and the part became discoloured, being dark blue. Patient was able to walk a little though with much difficulty and pain and came to the clinique at the Institute.

The middle third of the calf was deeply discoloured from extravasated blood and there was considerable swelling. There was great tenderness along the inner border of the gastrocnemius and soleus in the middle third of the calf, and the affected part was hotter than normal. Passive extension of these muscles caused pain. Prof. Murray, who was consulted, diagnosed ruptura musculi in the right calf.

The patient did not come under my care at once, but was treated by massage given with fat being first rubbed on the part. This was done daily from Oct-14th to 20th inclusive, with very little or no benefit. On October 21st I treated the case for the first time; I gave him chiefly vibrations over the

part, nerve frictions on the internal popliteal nerve, and running vibrations and frictions given centripetally. On October 22nd the patient was much better and had but little difficulty in walking. No treatment was given on October 23rd. On Oct.24th the pain was practically gone and the patient did an hour's fencing, which caused him nothing but slight inconvenience. The next day he practically felt nothing. I continued treating him however until October 31st, on which day the last of the extravasation and discoloration disappeared.

D. STIFFNESS IN THE LEFT TEMPORO MAXILLARY JOINT.

Mr J..... J....., aged 24 came to me on Aug. with the above complaint. His history was as follows: three weeks ago, on July 31st, he got a swelling on his left side and could not open his mouth; his submaxillary region on that side was also swollen and he was feverish. He got some ointment and applied it, but the condition only got worse. He then resolved to go to the hospital in Jönköping, but on the way "something burst" in his mouth and pus came out. At the hospital a tooth was extracted and the condition improved. On the 17th July he went to another medical man, as his jaw was stiff again, and the diagnosis he received was stiffness in the left jaw joint; he was recommended to try gymnastic treatment, and he accordingly came to Sanna on Aug.21st.

Examination:

There is no pain, excepting on endeavouring to open the jaw; this could be done voluntarily so that the teeth were separated by halfacentim. To try and open it still more caused him much pain, and the stiffness of the joint prevented any such additional movement.

Treatment:

Locally, vibrations given with the finger of one

hand over the lower teeth, given with pressure downwards and forwards at the same time (to try and open up the jaw joint). Then the patient was requested to resist while his lower jaw was approximated to his upper one. Also vibrations over the jaw joint.

Progress:

The jaw was opened out gradually, and every day about ½ centim. was gained. After seven days the patient had learnt fairly well how to apply the treatment himself and so did not come any more. I subsequently heard that after one week more of self treatment he was quite restored.

E. CHRONIC SYNOVITIS.

Case from notes taken by myself and Dr A. Moller)

Mr B..... J....., aged 25, came under treatment on February 14th 1900, suffering from chronic synovitis in right knee, chronic pains in abdomen and chronic laryngitis, headache, general depression.

History:

About two years ago his right knee began to be stiff and hurt him; it got better after some time, but then worse again. He went on alternately getting better and worse and then became steadily worse for three months before he came to me. At intervals when it was at its worst he was unable to stand on his right leg and lift up the left one and much pain was caused on walking.

For about 14 months he has been having pains almost constantly in his epigastric and left hypochondriac regions and the slightest touch over these parts often hurt him very much; sometimes he could hardly bear having his clothes on. At Easter 1899 he consulted a medical man who diagnosed Gastric Catarrh and gave him Carlsbad Water and castor oil. Patient felt somewhat better during the time of treatment which was one month, but as soon as he left

off he was just as bad again. Often when the pain in his abdomen was very bad, relief was to some extent obtained by getting a friend to give him a kind of stomach massage.

Every now and then the patient gets very depressed and cannot be cheered up. A chronic laryngitis has been present for some years; it has been rather worse the last few months.

Examination:

Patient cannot stand on right leg and lift up the left one without considerable pain in the knee and he walks in a somewhat limping way, hurrying over the time he has to support himself with his right leg. He cannot flex the affected knee further than a right angle without very much pain, and even doing this hurts Him. There is a very tender spot just internal to the right patella. Muscles of abdomen contracted and hard; tenderness to touch in the subcostal triangle, which is specially resistant.

Treatment:

(1) Reach grasp standing knee flexion and extension PA., right knee joint kneading etc., sacral beating, PP.

(2) Stretch grasp standing drawing forwards PP, shaking of the pit of the stomach PP.

(3) Sitting trunk extension and flexion PA. sit lying right knee extension and flexion PP, extension AR, Flexion PR.

(4) Stretch lean toe standing double knee bending PA.

(5) Heave grasp standing, chest clapping, side shaking PP.

(6) Stretch grasp toe standing going backwards, breathing PA.

(7) Forwards lying running nerve frictions, length hacking, right leg flexion PP, raising AR.

(8) Stride kneeling, sitting down PA. raising AR.

(9) Half lying double leg rolling PP, flexion PA, extension PR, right knee joint kneading PP.

(10) Half lying stomach exercise PP.

(11) Sitting head and throat exercises PP.

Progress:

March 14th (after one month's treatment) patient said his knee was much better, that it caused him very little pain and that pain only came on with extreme flexion. Pain in the spot internal to the patella much less. Patient however very soon gets tired in the affected knee when walking. Larynx is better. Pains in abdomen have disappeared. Patient says that his digestion has not been in such good order as now for years. The abdominal muscles are less tense and there is but little tenderness in the subcostal triangle. He no longer has any headaches.

April 7th: The right knee continues to improve and it does not get so tired as before.

April 14th: The last day of treatment. The tiredness in the knee only comes on after a considerable amount of walking. Laryngitis slightly better; patient is able to cough up easier and his voice sounds better. He says his digestion is splendid. No headaches; the depression has left him and he is continually in a cheerful state of mind.

July 18th, 1900: Patient is still feeling very well, slight stiffness in right knee after much walking.

November 2nd, 1900: Patient very well indeed.

F. LUMBAGO.

I have in several instances produced immediate relief in fresh cases, especially where the pain seemed to be caused by spasm of muscles rather than by actual inflammation.

In old cases, however, where there is chronic inflammation of the whole or part of the erector spinae, we arrange our treatment as follows:--

(1) Manipulations on the muscles, frictions or vibrations on them, hackings, beatings.

(2) Giving exercises in which the patient has to stretch (elongate) the affected muscles.

(3) Giving him exercises in which he has to use these muscles, either concentrically or excentrically.

(4) Stimulating the nerves to those muscles.

(5) Treating the constitution as a whole.

Case 1. Sällberg, aged 27, employed in the iron founding department in the factory at Husqvarna, came to me on 29th May, 1900. He said that he first began to feel stiff in his back about a year ago, and about 6 months ago it began to cause him serious inconvenience. A medical man he consulted diagnosed rheumatism and gave him powders. These did not help him at all and he got worse and worse. Early in May he ceased work for a few days; he then went back again but was obliged to stop away. He consulted Dr

Hällberg who diagnosed lumbago and recommended gymnastic treatment.

On examination the spinal muscles from the sacrum up to the 6th dorsal vertebra, were very hard and resistant, painful on manipulation, and even slight flexion forwards or sideways of the trunk caused him much pain, as did any other movements which caused active contraction or a stretching in these muscles

The treatment was as follows:

(1) Ride sitting trunk flexion PR, extension AR.

(2) Stretch stride standing bending forwards PA.

(3) Knee lean standing trunk flexion PR, extension AR.

(4) Side lying leg abduction AR, adduction PR.

(5) Lying double leg flexion AR, extension PR.

(6) Lying leg flexion PR, extension AR

(7) Hip lean walk standing lateral flexion PR, extension AR.

(8) Reach grasp standing knee flexion and extension PA, sacral beating PP.

(9) Forwards lying running nerve frictions with extra frictions over the most painful muscles PP, and length hacking PP.

(10) Half lying stomach exercise,PP.

Progress:

He felt better at once after the first treatment and continued to improve until June 16th when

caught a cold and was feverish. I treated him specially for that at home on 16th, 17th, and 18th. On the 19th he was able to come to me again and the only pain he felt was over the left side of the sacrum when the muscles were raised. On the 30th he was practically well; on July 2nd, he began to do some light work at the factory. He continued the treatment a few days longer to prevent relapse and at the end of it he left me quite cured and shortly afterwards worked again in the iron founding department.

September 23rd, 1900: Patient has had no relapse whatever.

December 10th: No pain at all in back or anywhere else.

Case 2. Isakson, aged 35, works in Husqvarna factory, had been suffering from lumbago on and off for 5 years and considerably worse the last six months. There was much pain on any movement entailing flexion of the trunk and after sitting still on trying to get up sharp stabbing pains were felt in the lumbar region. Muscles of back from sacrum to about 2nd dorsal were hard and resistant and tender to pressure.

Treatment was very like that in the foregoing case and it lasted one month, from October 3rd to November 3rd 1899. At the end of it patient left,

cured, having no pain or stiffness of any kind any more.

I subsequently saw him nearly a year later in August 1900. He says that this winter caused him to occasionally feel slight pain on considerable flexion forwards of the trunk, otherwise he has been quite well ever since he left.

G. ABSCESS IN THE ANTRUM OF HIGHMORE.

Mrs Anderson, aged 48, noticed on April 12th 1900, that on getting up a quantity of bad smelling yellowish matter came out of her nose, and that her nose felt stuffy on the right side. There was very much discharge in the morning as the patient, in consequence of weak cardiac action, always sleeps on her right side. On leaning her head over to the left side, discharge could be induced to come, or if already there, was greater in amount.

Patient came up to me on April 21st, complaining of continued pain in the right supramaxillary region, and discharge from the nose. On tilting the head over to the left side some thick yellowish bad smelling pus appeared from the nostril. There was redness of the right cheek and tenderness on touch and on slight percussion.

Treatment:

I treated the cardiac weakness with suitable exercises and the special movements for the right maxilla consisted of vibrations over the affected area with the head flexed to the other side, vibrations over the root of the nose and stimulating (by frictions) the trigeminal and facial nerves. Patient was allowed to be up all day as usual and do her ord-

inary house work.

April 23rd: Discharge less. Not so tender over the cheek.

April 24th: No pain therewhatever.

May 28th: Patient has been feeling very well all last month; discharge however about the same in amount. To-day it was thinner than usual.

June 2nd: Discharge thinner.

June 4th: Discharge looks like water.

June 5th: No discharge, no tenderness. Apparently normal.

June 16th: Treatment finished. No discharge or tenderness since the 5th.

December 20th: No return of discharge.

H. DISLOCATIONS AND FRACTURES.

I regret that I only give one example of the former and none of the latter, as singularly enough, these cases have been rare in my own practice.

The one example I give is dislocation of the right humerus.

Case, taken from notes by Dr Möller and myself.

Synogran, aged 48, worker in Husqvarna factory, had on three previous occasions dislocated his right humerus, i.e. (1) in 1886; (2) in 1896; when chloroform was used in order to replace it; and (3) in November 1898.

On this occasion the patient put the joint out at 9 a.m. on November 15th and came to me at once.

The diagnosis of dislocation forwards of the right humerus was quite easy - the right arm hung limp and useless, there was a depression below the acromion and the elbow was backwards. The head of the humerus could be felt lying under the pectoralis major. No signs of swelling. There was very much pain in the region of the joint, and patient was pale and shivering with it.

Dr Möller and myself affected reduction as follows:-- I lifted the arm high up into stretch position and then asking the patient to resist as much as possible I performed adduction of the right arm with traction away from the shoulder, bringing the whole limb somewhat forwards as I went. While doing this, Dr Möller pressed in the head of the bone. The theory of this procedure was; first, by traction to bring the head of the humerus over the rent in the capsule; the exertions of the patient to resist caused the deltoid to act as a fixed lever, one end of which was from that point to my grasp on the forearm, and the other from that point to the head of the humerus. The bringing downwards and forwards of the whole arm caused the head of the humerus to pass upwards and backwards into the capsule again.

Having effected reduction, I immediately gave some passive vibrations to prevent imflammation, duplicate movements at the shoulder joint, taking care to avoid those which would cause the head of the humerus to pass downwards, i.e. such movements as the following were given:--

Swim sitting right elbow pressing downwards PR.

Sitting right foreform flexion AR, extension PR.

Sitting right arm traction sideways PP, followed by the patient trying to draw his arm in again with AR.

I gave the latter to tone up the stretched and lax muscles round the shoulder joint, so as to prevent redislocation, as the strength of that joint mainly lies in the muscles around it and those were weakened. I sent the patient home without any bandage or fixation and told him to move his arm as much as he liked, taking care only to avoid any movements of abduction. I also gave constitutional treatment.

Nov.16th: Patient slept very well, hardly any pain. There was no increase in the latter on movement.

Nov.18th. Patient lifted his arm up almost to the perpendicular (i.e. stretch position). No pain.

Nov.21st: Patient went back to work and did 9½ hours of metal polishing. Some extra strengthening exercises have been added lately.

Nov.28th: Patient has been at work all this week, and says his arm feels quite well.

December 14th: Patient continued treatment until to-day. He left with his shoulder joint quite normal. In addition to this, his digestion was much improved by the stomach exercise which he got every day.

Patient remained quite well until March 31st, 1900, when on lifting up a weight with his right arm,

he redislocated it in the same manner. He immediately came to Sanna, and Dr Möller and I reduced it in the same way as before, and gave passive movements immediately after it. Hardly any pain. No bandage was used.

April 1st: Slight pain anteriorly. Active and duplicate movements given.

April 3rd: Treated for the last time. Normal. Returned to work.

December 1900: There has been no dislocation since.

The following cases of dislocation benefitted by the manual treatment have been published in "Technic of Manual Treatment" by Dr A. Kellgren, 1890.

Infra-clavicular dislocation of the left humerus . . . . . pp. 144-146

Fracture of the lower end of the radius . . . . . pp. 146-147

Stiffness of the elbow joint after fracture at the upper end of the radius pp. 147-150

Double fracture of fibula at its lower third with fracture of the internal malleolus . . . . . pp. 151-154.

Double fracture of the fibula at its lower third . . . . . pp. 155-157.

Another interesting case treated by Mr Kellgren has been described by Dr Edmund Owen in the "Lancet" for November 18th, 1876, pages 709 and 710 under the

title of "Gunshot Injury to the Mulsulo-spiral nerve"; in the same journal for December 3rd, 1876 pa806, is found a letter from Dr W. H. Broadbent stating that he saw the case before and after treatment, and certifies to the excellent speedy recovery that took place.

LIST OF WORKS REFERRED TO IN THIS THESIS.

Bramwell, Byrom: Diseases of the Spinal Cord.

Branting: Efterlemnade Skrifter.

Broman: School Gymnastics.

Bum: Handbuch der Massage und Heilgymnastik.

Eira: 1889.

Georgii: Kinetic Jottings.

Goldscheider: Die Bedeutung der Reize fur Pathologie und Therapie in Lichte der Neuronlehre.

Grey: Anatomy.

Hartelius: Lärobok i Sjukgymnastik.

Om Sjukgymnastiken vid gymnastiska Central Institutet under år 1863.

Gymnastiska Iaktagelser.

Hoffa: Technik der Massage.

Hygeia: 1872-73.

Kellgren: Technic of Manual Treatment.

Zur Technik der Schwedischen Manuellen Behandlung.

Kleen: Handbok i Massage.

Kohn: Le Traitement de Kellgren.

Lancet: 1876.

Loven: Vårs Tids Forskning.

On the Blood.

Medical Press & Circular; 1888

Möller: Zur Therapie der Habituellen Obstipation.

Munk: Die Physiologie des Menschen und der Säugethiere.

Neumann: Die Heilgymnastik.

Lehrbuch der Leibesübungen.

Nussbaum: Neue Heilmittel für Kranke Nerven.

Roth: Handbook of the Movement Cure.

Schäfer: Textbook of Physiology.

Tidskrift i Gymnastik.

Wide: Handbook of Medical Gymnastics.

Wretlind: Hälso- och Sjukvårdslära.

Hälsovannen.

Om Rörelsekuren eller Kinesitherapien.