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Massage
in the Practice of Medicine

a Thesis

by

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Chapter First

The History of Massage

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There are few fields of science on which so many battles have been fought as that of medicine. From the days of Hippocrates and Galen to the present time, the history of the healing art has been a very chequered one.

Systems have been advocated for a time, have held sway & finally have disappeared. Many theories have been constructed, which after reigning for a while have been found to be false as the light of advancing science was shed upon them. Special cures have been adopted by one generation only to be declared barbarous and absurd by the next. There has been a continuous struggle among rivals for supremacy. The struggle has, however, on the whole been a noble

one, for it has been one long search after truth — a search which through all the contentions of opposing factions has never been lost ^{right} of.

Many of the systems which have long ago been abandoned as untenable have nevertheless a great interest for professional men who in the most empirical of these systems sometimes discern a germ of truth. Those, however, which still hold their ground and are likely to hold it with increasing confidence have an interest for all.

The history of what is called the 'movement cure' is the history of a system of this latter class.

Since Francis Fuller published his work on 'medical gymnastics' in 1940, there has been an almost uninterrupted succession of works especially in France and Germany bearing upon this deeply interesting branch of medical science.

Within the last ten years the literature of the subject has been vastly increased and it is very obvious that it is

destined to become more and more a recognised department of professional study on the part of every medical man who would be well equipped for the important functions of his office.

The method of curing disease by mechanical movement can be traced back many centuries before the birth of Christ. Among both the Chinese & Indians it was a common practice and in the old 'Cong Fou' of the former and the 'Susruta' of the latter, valuable dissertations exist, showing a great appreciation as well as a considerable knowledge of medical gymnastics. Thus early in the history of our race the idea was entertained that many diseases were capable of being mitigated or removed by muscular exercise.

A discussion of the theories and practice of the ancient Chinese physicians is to be found in a book published in Paris, in the year 1850. by F. Lutterbach, entitled "Revolutions in der art des Ganges," from which it may be gathered that though often successful yet, the physiological grounds

Ancient History

Chong Fou

Susruta

Lutterbach
1850.

Practice in China

upon which their system was based were doubtful. Even now it appears that many institutions exist in China for the mechanical treatment of disease which are modelled in accordance with their old system.

Shampooing

In India 'Shampooing' was the term generally given to their treatment.

The system too is known & practised in the most remote islands of the southern Hebrides. I have heard a missionary from these islands relate how astonished he was when he saw a paralysed man being rubbed & beaten in the course of treatment.

used in
South-Hebrides

It was probably from the East that this branch of art like many more spread west to the Greeks and Romans. Democritus, the famous physician of Abdera, it was who first used the expression as denoting ^{the essence of} human happiness; — "Sana mens in sano Corpore" and Hippocrates of Cos (B.C. 460) gave utterance to the axioms which seems to be truer now than ever: — "Natura sanat morbos, natura magister, medicus minister naturae" — The principles of

spread from
East to West -

Hippocrates
(B.C. 460.)

Hippocrates were adopted and carried into practice by the leading physicians of Greece and Rome. — Plutarch relates that Caesar was daily under the hands of a slave who gripped and rubbed his body for the cure of neuralgia. (I.)

In the succeeding centuries these medical methods were quite forgotten and for the first time in the year 1680. when Des-Cartes, Bacon, and Newton were making their influence felt in Europe.

Bovelli 1680.

Bovelli published his book "De motu Animalium" — The school then established called ^{the} Hyatro-mechanical school soon fell into disrepute and the chemical school of Paracelsus prevailed.

Hoffman
1680.

In the mechano-dynamic system of Hoffman we find the first elements of the German school of Gymnastics as a cure. Hoffman was born at Halle in 1660.

(I) Percurrit agili corpus arte tractatris
Manumque doctam sparqit omnibus membris.
martial

His system contains, it must be acknowledged, many errors and imperfections, but, yet, the main principles of his system stand to the present day as a part of the stable foundation, on which medical science rests.

His principal work is entitled -
 "Die Bewegung das beste Heilmittel für den Körper."

The first English work on the subject was that of Fuller already referred to. He treats of the influence of motion on the animal economy and its usefulness in various forms of disease, such as phthisis, dropsy etc.

Following this work which opened up the subject once more came the

"Dissertatio de arte gymnasticae nova" by Borner, and the "De Gymnasticae medicae Veteris inventioribus" by Gerike 1748.

A work however which left a greater influence was that of Lissot, a French physician, entitled, "Gymnastique medicale ~~et~~ on l'exercice appliqué aux organes de l'homme d'après

First English work. 1740

Borner.

Gerike 1748.

Lissot 1781.

le lois de la physiologie de phygiène et de la thérapeutique." 1781. In this work great stress was laid on the methodical and regular exercise of the various muscles. The two next productions of importance on this subject were from Edinburgh. Dr. Barclay wrote on the "muscular motions of the human body" in 1808, and Dr. Balfour on "Illustrations on the power of compression in the cure of rheumatism, Gout, and in promoting health and longevity" also in 1808.

Dr. Barclay
1808

Dr. Balfour
1808

The most important epoch, however, in the development of mechanical Therapeutics was in the beginning of the present century. It was then that Ling appeared and established his mechanical methods. This distinguished man was born at Ljunga in Sweden in 1776. He began his university studies at Copenhagen in 1804. He was cured of rheumatism in his arm by the gymnastic exercises in which he engaged in the fencing

Ling.
1776 - 1839.

school, which had been founded there by French emigrants. This led him to the idea that systematic exercise might have a distinct therapeutical use. He gradually thought out a plan, involving a complete series of exercises, and thus established the system to which his name was given. He carefully studied anatomy and physiology and all the ancient writings on the subject and when at length he was appointed to the situation of fencing master in the university of Lund his ideas took practical shape. In maintaining his opinions he had for many years to contend against prejudice and ignorance. In 1812 he formally laid his scheme before the Swedish minister of instruction but received the discouraging reply, "We have enough of jugglers and rope dancers." Ling, however, never lost confidence in his system. In the year 1813 the Central Gymnastik Institute was

established by royal authority at Stockholm. There Ling had the opportunity of developing his system which within a short time was introduced into the Army and schools as a part of their discipline. Many of the Swedish doctors studied Ling's system and adopted it. He now rapidly rose in his profession. He received the title of Professor and was decorated with various orders. He did not however long enjoy the fruits of his laborious life. In 1839 he died from phthisis, which had long been undermining his constitution.

His great work "Abhandlung über die allgemeinen Grundsätze der Gymnastik," was published after his death, under the Editorial care of two of his pupils Drs. Liedbeck and Georgii.

Ling's Principles

The underlying principle of Ling's system is the harmonious development of the organs of the human body. This was essentially an idea derived from the Greeks. It appears in all

their philosophical works. It held a place in all their paedagogic institutions and influenced all their public games.

In giving effect to this principle ^{and} Ling established on a scientific basis a ^{and} gymnasium for the people utilizing the experience of the best gymnasts, the researches of the ancients and the facts of anatomy and physiology. His principles and methods were adopted by his pupils and by them this new method of healing was introduced into Germany, France, Russia & England. In all these countries Heil Gymnastik Institutions were soon established.

Ling and his disciples directed their attention specially to active and passive movements. It was about a quarter of a century ago that the method of mechanical kneading and rubbing was brought into notice and then principally in France under the title which has since been given to the whole system

and
gymnasium.

Massage

"massage". The publications by Elleaume, Maqne, Serrier and others brought the system of Kneiss-therapeutics into closer accord with the principles of surgery & medicine.

Estradère
Weir Mitchell

The treatise of Estradère and still later that of Weir Mitchell gave a very distinct impulse to the further scientific study of the subject as appears from the numerous articles in the medical journals lately especially on the Continent and from the many Heil-gymnastik Institutions which have been recently established. The subject began also to have a ~~distinct~~ distinct place assigned to it in works on general Therapeutics as e.g. "Von Ziemssens Handbook of General Therapeutics". Vol I

Chapter Second

The modus operandi

Massage and the modes of performing it.

Massage
Derivation

The word massage according to Priory is derived from *массаж* to rub. According to others however its derivation is attributed to the Arabic word 'mass' to rub softly. Literally therefore massage means a soft 'kneading'. The word 'kneading' however by no means conveys a correct impression of the system and it is perhaps unfortunate that it should have so extensive and undefined a meaning as is now attached to it.

Massage is only one of the many methods peculiar to the system. Some French writers adopt the term 'Manipulation Therapeutique' but this too is faulty. Perhaps it may be best to speak of it as simply - 'mechanical Treatment' a title which would include all the methods employed.

Ling's method

The methods originally employed by Ling were these three: (I) Active methods (II) Passive methods and (III) a compound of the active & passive.

In this last group of methods the peculiarity and success of Ling's method consisted.

Active Exercises

By 'active' exercises Ling meant those in which the individual will was the sole factor - the patient moving his own joints and muscles.

Passive Exercises

By 'passive' exercises he meant those in which the patient expends no energy at all, the gymnast moving his muscles & joints in various ways.

Compound

In the group of 'compound' exercise the manipulator and the patient operate simultaneously. Each expends energy. Thus for instance the patient makes a movement to which the gymnast opposes a graduated amount of resistance or the gymnast makes a movement of the patient's limbs which the patient resists.

In performing these several operations Ling specially directed that there should be no jerking or sudden movement, made by the patient and that the resistance offered

by the manipulator should be steady, commencing gently, increasing slowly, and then gradually subsiding. Ling taught that gymnastic exercise should not be continued too long especially at first, and that between the various sets of exercise and motions a sufficient rest should be taken. At the beginning of the sitting gentle movements only should be used, increasing to much stronger ones and again diminishing in strength. No movements should be of such strength or be continued so long as to weary the patient. The manipulator should always be mindful of the axiom 'nil prodest quod non laedere possit idem?'

Massage proper, however, found but a small place in Ling's system. The various manipulations which constitute massage may be described as belonging to the second group - viz the passive group for in the performance of these manipulations

the patient is quiescent and the energy is all expended by the manipulator.

Professor Morengeil (1) divided these operations into four classes which he designated by the French terms -

- I.) Effleurage
- II.) Massage à friction.
- III.) Pétrissage
- IV.) Tapotement.

These terms are perhaps too fanciful; but they appear to be now generally recognised as indicating the various divisions of massage. This we regard however, as an imperfect subdivision and these modes do not sufficiently describe massage.

The practice of anointing the hand which is pursued by some manipulators in order to facilitate the gliding movement over the skin is by no means to be commended. It is to be condemned

1.) Verhandlungen d. Deutsch. Gesellsch. f. Chirurg. 4 Congress. Berlin 1876.

Morengeil's
Division.

Anointing
hand.

on the score of cleanliness, while at the same time it closes up the pores of the skin and is besides unnecessary, inasmuch as a skilled masseur will never irritate the skin.

The only exception that should be made is in the case of a specific disease which might be communicable. In such a case the operator may use an antiseptic preparation. In France it is more the custom than the exception to use an unguent of some kind, commonly a liniment consisting of camphor 10 parts, Laudanum 10 parts and oil 60 parts. I have frequently seen massage performed, and have myself performed it, using considerable strength, and never have I seen any irritation caused by it.

The 'Efficage' described by Mosengeil consists in a series of centripetal strokes made with the palm of each hand alternately over the surface to be operated on.

In "massage à friction" the

Efficage

massage à friction

the finger tips are used. Those of the one hand working with elliptical rubbings, while those of the other follow with a stroking movement. This method is closely associated with Effleurage.

Pétrissage

The "Pétrissage" of Morenueil is really the most important and essential part of the treatment by massage. It is a thorough kneading of the parts and can be made to affect the deeper structures or the superficial ones according to the degree of strength and firmness of grasp employed. When properly performed this is the method from which I believe most of the benefit of the massage treatment is gained. The results obtained by Effleurage and massage à friction, can be better and more quickly obtained by the gentle use of Pétrissage.

Pétrissage or kneading may be made with one or both hands according to the position of the parts kneaded and the necessity of the case. The hand

is laid lightly on the skin with the finger and thumb wide apart and a grasp is taken of the muscle to be massaged. The parts are then pressed and rolled the hand being made to move in a circular fashion. The pressure is made mostly with the palm and the ball of the thumb and must invariably be made toward the center. The hand must not glide over the skin but the skin must move with the hand. In the care of cicatrices the result of burns or wounds this is not always an easy task. In such cases a smaller part must be kneaded at a time and the ball of the thumb must be moved round in smaller circles. When both hands are used for kneading as for instance in kneading the thigh the hands are laid down with the thumbs close together and both work simultaneously but in opposite directions.

In a long article by Busch in "Von Ziemssen's Handbook of general

pressure
towards centre

"Therapeutics"^{vol II} (p. 43) the stroking movement of Effleurage is recommended for abnormal collections of fluid such as extravasation of blood and exudations but these I regard as much more amenable to treatment by the simple kneading process provided proper skill and gentleness be employed.

I have seen cases of painful effusions which the patient could hardly endure to be touched treated by kneading. Gentleness and lightness of touch are essential and any pain that is at first felt invariably disappears or at least diminishes in course of treatment. In cases of extravasations the stroking of Effleurage will I think rather tend to irritate and hasten suppuration than quicken absorption. There is nothing irritating in skilful kneading.

Tapottement "Tapottement" is the name given by Mosengeil to the various kinds of percussion. Special apparatus of whale-bone, swan's feathers, wood etc.

Tapottement

have been used but no masseur would use them now. The best instrument for performing it is the hand of the operator. The operator holds his hand loosely not rigid, most of the movement being made at the wrist with the fingers slightly apart and strikes the part with the side of his fingers using both hands and rapidly alternating the strokes. Even in health when this is done over the back a pleasant feeling results, resembling the feeling of rigour after a bath. Still another mode under the passive group, which is much used and of some service consists of vibration. The hand is laid flat over the part to be operated on and then rapidly but gently vibrated. This method is of considerable service before commencing the kneading process as it seems to accustom the parts to the hand and prevent pain. It is much used in the manual treatment of constipation and

Vibration

and when applied over the precordium seems to quiet the action of a palpitating heart.

Nerve stimulation may be made by the operators finger. The patient assumes different positions according to the part to be operated on. The operator then excites and vibrates the nerves mechanically, following their course with his fingers. When a painful spot is touched the operator should not withdraw his hand but continue to vibrate gently, and oftentimes the tenderness shortly disappears. Lately Dr. Mortimer Granville of London, invented some mechanical instruments called 'Percuteurs' by which a rapid and graduated vibration may be made over a nerve or muscle:—The plan of treatment adopted by Weir Mitchell and which has been so successful in cases of hysteria & hystero-Epilepsy consists of four factors:—I.) Seclusion of the patient and absolute exclusion of all but the medical

nerve
stimulation

percuteurs of
Mortimer Granville

Weir Mitchell's
method

attendant.

- II. Absolute rest in bed.
- III. A systematic feeding of the patient.
- IV. The use of massage and electricity. The massage is conducted systematically the skin and muscles of the whole body being kneaded at first for half an hour and afterwards for an hour daily. Co-coa-nut oil is sometimes used to render the kneading process easy and it is also said to help the fattening of the patient. (1)

Chapter Third

The Physiological Action of Massage

Lymph & blood
stream hastened

Massage hastens the flow of the blood and lymph stream. Lymph plasma is regarded as a fluid derived from the blood by filtration into the tissues. The lymphatics originate in open spaces in connective tissues. Into these spaces the lymph plasma passes and having supplied the wants of the tissue, passes back again in an effete state into the spaces and from these reaches the lymphatics, which ultimately pour them into the venous stream. Now on the veins and on this system of vessels and spaces, massage acts as a pump. The venous blood and lymph plasma are pressed onwards while the backward flow is prevented by the arrangement of the valves. The mechanically emptied lymph canals are then in a condition to receive more lymph from the blood. The contraction of the surrounding muscles produced by the various

manipulations also aids in this result. This is well seen in venesection. When the muscles contract, the blood flows out more rapidly.

From these facts we can see how it is that exudation, if accessible to mechanical treatment, can be relieved by this means. The very interesting experiment of von (1) Mosengeil show the quickness of the resorption which massage can produce. We can refer to one of these as an illustration:- one morning at 9 o'clock he injected into both knee-joints of a rabbit some finely ground Indian ink. Immediately after the injection the temperature in rectum was $100.8^{\circ}F$ at half past 9 the right knee was subjected to massage. The animal thereafter leaped about and pricked its ears. at a quarter to 10 some ink was again injected into both knees and immediately the right knee was again operated upon. This time the pain appeared to be more

1) "Langenbeck's Archiv für klinische Chirurgie" 1896.
913d. Band 4. Heft-

violent than under the first injection. The animal was violently agitated and was held with difficulty. After the kneading the knee was reduced to its normal size. The left knee not being subjected to massage became at the same time gradually thinner, but this was attributed to the rabbit running about. At 3 in the afternoon some ink was again injected into both knees and the right knee was immediately kneaded. After two minutes all swelling disappeared from the right knee while the left remained thick and swollen. The temperature of the rectum rose to 102.2°F ., and in the evening about half past 8 to 104.0°F . The animal appeared, however, so far as its appetite indicated, to feel nothing wrong for it ate greedily. At a quarter to 9 an injection was again made into each joint. A whole injection did not go into the left but the right received it all. The

knee was again kneaded. On the morning of the following day a half injection of finely titrated ink was made into each elbow and then the joints were subjected to massage. The animal was shortly afterwards put to death. On being examined the ink was found to be diffused in irregular spots in subcutaneous parts around the punctures and black spots showed themselves in the region of the vessels and the interstices of the muscles. On the one side the lymph glands of the shoulder contained ink and the fine vessels appeared of an intense black colour.

Thus it appears that an injection into a joint can be removed by being pressed into the lymphatics, and as the fluid in a joint diminishes it is clear that the pain caused by pressure on the nerves of the inflamed area will diminish *pari passu*. The mechanical operation of kneading

Antiphlogistic has thus a distinct antiphlogistic action for, by it resorption is hastened and swelling, pain and increased temperature diminished.

This quickening of the blood current produced by kneading will account for the removal of waste products from worn out muscles and the restoration of their power. When the muscle of an uninjured frog are stimulated to contraction by the rhythmic applications of maximal induction currents until they are exhausted and no longer contract, massage restores their contractility so that their contractions are nearly as powerful as at first while simple rest without massage has very little restorative effect. In man, also, while a rest of fifteen minutes had very little restorative action massage during the same period increased two fold ¹⁾ the work that could be done.

1) Zabludowski, Central. d. med. Wiss. 1883. No. 14 p 241

Increases electrical
contractility of
muscular tissue

After massage there is as a rule a distinct rise in temperature and this rise occurs most notably according to Weir Mitchell "in persons who owing to some organic disease have acquired liability to great changes of temperature." (1)

Much of the good resulting from the treatment comes about in this way :- The lumen of the blood vessels is under the control of the Vaso-motor-nerves and, by stimulating these nerves various changes take place in the condition of the vessels influencing nutrition. If the web of a frog is examined under a microscope and the vessel supplying the part mechanically stimulated there results first of all a contraction of the lumen of the artery, the contraction being sometimes so great as apparently to occlude the lumen. This contraction is quickly followed by a dilatation of the vessel which continues much

1) Weir Mitchell "Fat and Blood" 1885. p 80.

Rise in temperature.

Effect on Vaso-motor nerves.

longer than the contraction. According to Claude Bernard the dilatation of the vessel is the result of stimulation. But, besides the direct stimulation the condition of a vessel may be affected reflexly by stimulation of sensory nerves.

Thus the arteries of the ear become dilated by stimulating the auricular nerve, and the arteries of the foot by stimulating the *nervus dorsalis pedis*. If this reflex stimulation is continued the hyperaemia passes into inflammation. Local blood distribution can thus be greatly influenced. The influence of mechanical irritation like electric stimulation depends on its intensity. Stimulation by pressing on a nerve or muscle if it be gradually increased will end in the gradual bruising and death of the tissue - a single quick stimulation will end in a single convulsion, whereas a series of quickly succeeding mechanical stimulations will probably end in

tetanus.

The effects produced by mechanical stimulation of nerves or muscles may be probably due to a molecular change in their structures. According to Fleischl the axial cylinder of the nerve has a fluid condition and thus the propagation of mechanical stimulus can be easily explained by the undulatory theory. Dr. Mortimer Granville in a recent work on 'Nerve Vibration and Excitation' says "what Newton discovered and taught in explanation of the phenomena of light and sound with the recognised correlations of the diatonic and chromatic scales must be equally applicable to an as yet unrecognised but doubtless existing scale of nerve vibrations". This vibratory theory too seems to be favoured by the good

(1)

(1) Fleischl "Arch. f. Anat u. Phys.", 1882
 + "Wien Sitzb. 1878"

nerve stretching results sometimes produced by nerve stretching. Some of the advocates of this theory hold that these results are due to an alteration of the rate of vibration. ^{Stintzing} Concluded from (1) experiments on animals that stretching a healthy mixed nerve has a paralyzing action in general proportional to the power expended. This has about the same action on motor, sensory and trophic activity when powerfully stretched the nerve lesion is the prominent result. When stretched more easily, centrifugal and centripetal present only a quantitative difference, the former producing paralysis, the latter having greater transmedullary effect. Just lately Dr. Stabrowski has published a series of researches which he made with a view to

(1) Stintzing "Ueber Nervenendehnung"
Leip. 1883

Effect on the
Pulmonary - Cutaneous
Exhalations

determine the effect of massage upon the pulmonary and cutaneous exhalation. They were carried out in Professor Manassein's wards in St. Petersburg on fourteen persons, nine of whom were in good health and the remaining five convalescent from various acute diseases. In each case the duration of the observations was ten days, during the first five of which massage was practised. Deep kneading was practised for the first two days after which the body was washed over with a wet sponge to remove the fatty matter adherent to the skin. During the next two days deep rubbing was practised and then the wet sponge used again. On the fifth day deep rubbing with the dry hand was practised. The massage took place at 10 a.m. except in two cases, where it was performed at 4 p.m. with the object of observing its effect on nocturnal perspiration.

The sittings were of an hour's duration. The results in the different cases were discordant. In five cases there was an increase in the pulmonary cutaneous exhalation and a diminution in the amount of urine, the increase occurring shortly after the massage so that when this was practised in the morning the perspiration was increased during the day, but became normal at night. Similarly the quantity of urine fell during the day and rose again at night. In three cases the massage increased the quantity of urine & diminished the pulmonary cutaneous exhalation. In the remaining six cases both the urine & pulmonary cutaneous exhalation were increased during the period of massage. The general effect on the pulse was to lower it ten to fifteen (1)

(1) "Lancet" March 26. 1887 p. 637

beats. No alteration appeared to be produced in the rate of respiration.

From a series of observations made on healthy persons by W. Symonds Eccles the results of which were communicated to the Royal Medical and Chirurgical Society of London in January last he concludes that.

"Effleurage stimulates the skin muscles produces dilatation of the superficial vessels and insensible perspiration excites the skin reflexes and acting through the cutaneous nerve increases the rapidity of the circulation and heart's beat.

Petrissage forces the lymph out of the muscles increases the velocity of the blood current through the part, temporarily decreases the size of a limb and increases its muscular power. The pulse rate is reduced especially in abdominal massage.

Massage à friction produces the same local effects as petrissage and

is peculiarly applicable to joints.

Yapptement excites muscular contractions.

The immediate and remote effects of massage, a combination of the above named manipulations are 1) that the texture of the skin is improved 2) the sense of locality increased, 3 the general temperature of the body raised, the free surface temperature of a part under massage being higher than that of the rest of the body while abdominal massage decreases the surface temperature of the extremities.

A course of massage of one months duration increases the weight of the body, increases also the appetite, the muscular strength, and the ability to sleep and work and will."

Chapter Fourth

The Use of Massage in Medicine

The use of massage in medicine.

There is little doubt but that massage has been lately employed in many diseases in which it is certainly not indicated and in which it may possibly do harm. It is a valuable agent but like many others has lately I think been overestimated in some quarters. It has also been underestimated I believe, as for example when Dr. Playfair in (1) correspondence states that it can be called "nothing more than a vicarious way of giving exercise to patients who cannot take it themselves" massage may be all this, but it is something more. When massage is employed in cases of joint or other effusions in cases of sciatic paralysis and that too often with surprising results it is something

(1) "Lancet" Oct. 30th 1886

more surely than a mere 'vicarious way of giving exercise to those who cannot take it themselves'. It is impossible for me to enumerate in this thesis all the diseases for which massage has been used with benefit. The cases recorded being so numerous and of such a different character that the precise range of its application cannot be gauged accurately as yet.

I mean only to record some types of cases in which I have seen it useful. — In that class of cases in which owing to injury or rheumatism a stiff joint has been

While practising in London a very interesting case came under my observation. It was a case which I saw in conjunction with Mr. Arvid Kellgren M.B. and which I had the opportunity of treating personally. — P. W. Sheffield — as a result of rheumatism had acquired

a stiff knee. When first he came under observation massage & movements were tried but no progress seemed to be made. Forceful breaking down of the adhesions was then suggested to him and with his consent was carried out in two operations under chloroform. The first breaking down was only partial but at the second, on Wednesday the 10th Sept, the knee adhesions were completely broken down. The leg being flexed on the thigh as much as it can be in normal circumstances. The pain after the operation was very severe and the swelling in and around the joint considerable, but after gentle massage was applied the leg was laid in a bent splint and the patient felt the pain much abated.

Thursday 11th Sept. The patient passed a tolerably fair night, though he was restless. The pain gave slight discomfort. Spasmodic jerks were

felt during the night at the knee joint. On examination the joint was found to be more swollen than on the previous evening & there was slight discolouration in front just below the patella. The joint was then moved - both active and passive movements being tried - and afterwards treated with massage. The patient expressed himself as much relieved after treatment pulse 82.

Temp. 99.4.

Friday 12th Sept. The tension in knee was greater and the area of discolouration had extended much further in front. Movement and massage were again applied - in the evening his temp. rose to 100.7.

Saturday 14th Sept. The discolouration was more diffused, and pain not so great but jerking spasms occasionally - Temp 99.27. The same evening his temp was 99.6. The swelling was great still, but the extravasation colour was changed

and movement of the joint through a small limit was easier and without pain.

Sunday 15th Sept. The swelling was still considerable and the jerking pains were annoying. The same treatment was carried on but the splint was laid aside. During the following days the pain lessened in a marked degree and the swelling and discolouration rapidly disappeared. Four days after the operation the patient was able to get downstairs. On the 4th Nov. he writes as following "I find I can walk fairly well though the leg does not bend much past the right angle, nor will it go perfectly straight like the other" — In this case active and passive movements were commenced from the very beginning and the inflammation which had set up instead of being increased quickly disappeared under the massage.

The great advantage of so early movement was afterwards evidenced in the easy and painless movement of the joint.

Lately I have had a case of very stiff knee joint resulting from the long continued bandaging and splints of a compound fracture in which massage and movements carefully graduated have produced a great improvement. - In cases of muscular rheumatism also I have used massage in several instances with great benefit.

Sprains: - In several of those I have employed massage. The mode of procedure adopted was to gently massage the sprained joint for about quarter of an hour morning & Evening and after each visit to carefully apply elastic pressure with cotton wadding and bandages.

Sciatica: - In one case of Sciatica in which every remedy had failed to produce relief. I tried massage. The

Muscular
rheumatism

Sprains

Sciatica

method was as follows - The patient lay on his front on a couch and vibrating friction was applied over the course of the sciatic nerve for five minutes: the parts were then massaged for ten minutes and finally the patient being turned on to his back was asked to extend and flex his thigh in active and passive movements. The séance altogether occupied twenty minutes twice daily. After the second visit the patient gradually improved.

Neuralgia

Neuralgia:- In neuralgia of various parts I have used massage with some benefit after other remedies have had failed. The general plan being first to vibrate the nerve and afterwards to apply massage over it.

Constipation

Constipation:- In some cases of constipation I have used massage very effectually. Vibrating the hand first over the abdomen and afterwards kneading it deeply, applying pressure in the direction

of the course of the bowel. In addition to this active and passive movements were made at the hip joint. One of the most efficacious of these was, I think, to lay the patient on his back on a couch with the hands placed at the side, and the chest thrown well out and then holding down the thighs, to request the patient to raise his body slowly and then slowly resume his former position. Most patients can do this, but if they are too weakly a very little help often is sufficient. By means of these active and passive movements tone is given to the parts concerned in defaecation.

Post-Partum Haemorrhage! - In midwifery cases when haemorrhage after birth threatens I invariably employ gentle massage - not pressure - over the uterus. In at least two of my cases with a previous history of flooding the danger has been averted by these means

Post Partum
Haemorrhage

Of course in nearly all the cases in which I have employed massage some other form of treatment has also been used - medicinal or otherwise - and therefore it is difficult to say in how far the massage was the remedial agent.

Yet from the cases in which I have employed it alone, and from my general observation, I cannot but come to the conclusion that in treating the cases specified above it is a valuable agent.

Massage has also been used with more or less success in orthopaedic surgery, in different forms of paralysis and even in heart disease & in other affections.⁽¹⁾ These diseases however require a form of systematic exercise which the time at the disposal of the practitioner will not allow.

(1) 'Von Ziemssen's Handbook of general Therapeutics'. vol 5:
'Year book of Treatment' 1896. p. 15.