Technique of Massage

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Chapter I General Technique of Massage.

For the mechanical treatment of various diseases by means of massage we use, in general five different manipulations, known as: 1. Stroking (Effleurage) 2. Kneading (pétrissage) 3. Rubbing (friction) 4. Beating (tapotement) 5. Vibration.

Effleurage.

By effleurage is understood a manipulation in which the physicians hand is closely applied to the affected part of the body, gliding over it in a central direction.

In order to make the effect of this stroking truly beneficial and to obtain this effect in the shortest time and in the most agreeable manner to the patient and physician, this stroking should not be done in an arbitrary way, but according to definite rules. These can best be followed if we observe the physiological effects of the effleurage.

If we place the hand on any part of a patient and with moderate pressure stroke the skin, we exert a mechanical stimulus on the very fine nerve endings of the part stroked. This stimulus asserts itself in visible and invisible ways:— visible in that through the communication of this stimulus to the walls of the bloodvessels, an active hyperaemia, and consequently a reddening of the skin ensues, invisible because the mechanical stimulus excites the sensory

nerves. Such a mechanical stimulus repeated on the part of the body affected, and always proceeding centrally, the active hyperaemia ensuing will have a beneficial effect on the nourishment of the part of the body concerned.

We see this on ourselves every day; in our own fingers and nails the extraordinarily rapid regeneration in the epidermis following the frequent washings and rubbings incident to the aseptic method of handling surgical cases. So effleurage, given with moderate pressure will be very valuable in counteracting atrophic conditions.

Concerning the influence of stroking upon temperature Berne estimates the rise of temperature always appearing, to be from 1⅓ - 5° C. after 5-6 minutes of massage.

Invisible yet no less real, is the influence of the mechanical stimulus on the sensory nerve endings of the skin. Everyone knows that a light soft stroking on the skin is distinctly agreeable, while a heavy pressure may cause pain. These immediate effects are not so important for our purposes as the later effects, which we know by experiment may be communicated to the central nervous system. This result we use. We know that a strong mechanical stimulus reduces the irritability of the nerves. Therefore, with a neurasthenic patient we can work upon the skin, and by general body effleurage

decrease the hyper excitability of the nervous system. Therefore this kind of massage is one of the best curative methods for neurasthenic patients.

Pressure from the stroking works freely upon the skin. Each heavier stroke will therefore penetrate deeper. After overcoming the resistance offered by the skin & fascia the pressure will directly affect the muscles. It is clear that the preponderating influence will affect the vascular system, blood & lymph circulation.

Von Mosengeil by a simple experiment showed the effect of massage upon the vascular system. An elastic tube is fastened to each end of a horizontal board without too great constriction of its channel. One end is dipped into a vessel filled with liquid which also fills the tube. Now if one presses on the tube near the end dipped in water, one can raise the other end of the board, and when the compressing finger goes forward, pushes out the liquid above. Behind the finger the elastic tube will resume its shape & suck up more liquid. Before removing this finger one can place below it a finger of the other hand and repeat the manoeuvre in the same manner; one thus has a simple suction & pressure pump constructed on the same principle as the bulb-syringe.

Very much in this way one can show the effect of centripetal stroking in living bloodvessels. Take a person, with visible swollen veins in the arms

we stroke over these, centripetally, decreasing the (blood?) pressure. thus ~~can~~ in a moment we can so empty them that instead of a rounded vein a furrow remains. If we stroke farther up a vein trunk, as far as the starting point of a lateral branch we empty not only the main trunk, but draw the blood from the secondary veins so that these too are emptied though not so perfectly as the trunk directly stroked.

What we see superficially occurs internally throughout the whole of the part stroked. Here not only the blood- but especially the lymph vessels play an important rôle.

The greater lymph vessels are formed by lymph channels in connective tissue, uniting with the lymph capillaries, a richly anastomosing set of channels, thinwalled, covered with endothelium but not provided with valves. Valves are first found in the larger lymph vessels formed from this capillary network, preventing the backward accumulation of lymph.

These greater lymph vessels run in the spaces between the connective tissues limiting the individual muscle bundles (intermuscular septa?) Another simple experiment shows this. If a fine mass of color, as Chinese ink or cinnabar is injected anywhere into the extremities of a rabbit, and then by stroking the attempt is made to drive out this injected mass, it is found by cross-section later

that the main part of the color mass lies in the greater muscle interstices, and that the color mass becomes less as the lymph streams have anastomosed, that is, the finer their transverse sections have become.

We found from the first experiment that effleurage promotes and accelerates the circulation of blood and lymph; we gather from the last experiment a very important rule in the technique of stroking.

If we would through stroking by the hand, completely empty the affected muscle of the liquid contained, an arbitrary stroking over the muscle is of no value. If we simply stroke along the muscle we have certainly press out a part of the lymph from the interstitial capillaries, but the greater part will simply flow back again when the pressure ceases, because of the elasticity of the tubes, though no suction takes place in the greater lymph trunks. The liquid will be fully drained off if such a back flow is prevented by stroking. This can be accomplished by only if the greater & smaller lymph trunks are stroked at the same time. The stroke must be more vigorous over the muscle groups we desire to affect. But since when we empty the tubes, whether of blood or lymph, more liquid is sucked in, so the circulation of this liquid is necessarily quickened. There will be a livelier flow of nutritive material to the region stroked, and a quicker outflow of the waste products of assimilation.

stimulating the process of assimilation in the part stroked.

We shall will attain this result in the shortest time and most agreeable manner if we carry out the stroking as indicated above. We shall acquire an anatomical method of stroking which will later be described as applied to the different parts of the body.

If the muscles are covered with thick fascia stroking with the palm does not penetrate deeply enough. In such a case one strokes the affected part with the knuckles, the dorsal aspect of the fingers flexed in the first interphalangeal joints.

The hand is placed in palmar flexion, the knuckles on the peripheral (distal) end of the affected part, as the hand strokes upward, it is gradually turned to dorsal flexion (Fig. 17)

The pressure in this case, as in the palmar stroke, should not be uniform, but increasing & decreasing. It should begin lightly, become stronger & then decrease, the hand lightly gliding over the surface. A moist hand is not adapted for massage. Physicians suffering from moist hands should make them dry & smooth by frequent washing in alcoholic solutions followed by dusting with salicylic powder.

The individual stroke should be done as lightly as if one were smoothing the part, moreover it should

always begin on a healthy region, continue through the diseased part and finish on a sound part. Of course a stroke of this kind can only be performed where there is room enough for the hands.

On parts of the body limited for space, for instance the fingers, the foot or the head, one strokes with the balls of the thumbs, one after the other, leading from the periphery to the centre.

If the hands are dry and smooth, no help is necessary in stroking. If the affected part is well covered with hair, shaving will prevent a slight irritation of the hair follicles. If the hands are not soft cold cream should be used, making the skin pliable but not interfering with the firm grip, or a few drops of liquid paraffin. Excessive use of cold cream causes loss of touch and grip, and weakens the treatment.

Effleurage forms the beginning and end of every massage treatment, and should follow pétrissage friction & tapotement.

To demonstrate the stroke we describe the execution on the forearm, separating the flexor & extensor groups.

Fig. 1. Taking the right forearm of the patient, the physician's hand glides over the dorsal joints so as to continue the stroke over the extensor muscles.

Fig. 2 The thumb follows the ulna, the fingers follow the furrow separating the flexor & extensor groups. Thumb & fore finger meet behind the origin of the

extensors, - the external epicondyle. This ends the stroke,
Fig. 3. with the hand arching over the patients' arm.

The flexor groups likewise receives effleurage from the right hand of the physician, smoothing over
Fig. 4 the palmar surface of the forearm and wrist joint, the thumb first along the radius, and then in the furrow between the supinator
Fig. 5 longus and the flexors while the fingers follow the course of the ulna without pressing on it. The stroke ends at the internal humeral epicondyle.

2 Kneading, or Pétrissage.

By pétrissage is meant a manipulation especially affecting the muscles. The object is to press out of the affected muscle groups and soft tissues as much as possible of the liquids containing without injury to the sound parts. The physiological effect, therefore, is that of a reinforced stroking, increasing the nutrition and vital energies of the part generally. Later researches of Zabludowski, Maggiora & Brandis have showed that through massage the fatigue products of muscular work are more quickly carried off, and that the contractility of the muscle fibres is increased. Brandis does not agree with Zabludowski & Maggiora that the muscle fibres recover from fatigue more rapidly with massage and through a suitable period of rest.

We wish to emphasize the oft-repeated clinical experience that petrissage of atrophied muscles brings about most beneficial results especially if the muscle is also made to contract.

Petrissage must be given in accordance with anatomical conditions. Each individual muscle-group should be treated, with effleurage before and afterward.

With regard to the technique of petrissage the part to be treated should lie transversely before the physician, both hands are so placed as to be oblique to the direction of the muscle fibres the thumb pressing against the fingers of the other hand. The manipulation begins at the peripheral end of the muscle group, and proceeds centrally, the hand which is in advance separating the muscle as much as possible from the bone, moving forward in a zig-zag course, pressing the mass, while the other hand following & doing the greater part of the work by an alternate "over & over" grip working upon the part already picked up by the preceding hand. The stroke will be much easier if the shoulder muscles are allowed to do most of the work.

Fig. 7. p.10.

In another kind of kneading the affected part is grasped so that the muscle mass is compressed between the thumb and the four fingers as between pincers, while it is drawn up from the

underlying bone pressure is exerted downward, and the kneading proceeds step by step from the periphery to the centre. This kind of petrissage is especially valuable for young children, for very emaciated limbs or atrophied muscles. The amount of muscle becomes so increased that it can readily be grasped.

Fig. 8.

On parts of the body, as the back, where the muscles are spread out and cannot be grasped with the entire hand, or where the fascia is very thick, one uses another kind of petrissage, the two-finger petrissage. The affected part is grasped between the thumb, fore- and middle-finger and pressure is exerted in such a way that by a shifting of the skin with a slight circular movement with the shoulder joint, the interior of the muscle is reached.

Tapotement.

Tapotement is given with both hands of the masseur in a position between pronation & supination placed perpendicularly over the part to be treated. While the hands change position to complete supination the finger tips strike the affected parts of the body with no great force but with considerable quickness & elasticity. The wrist & finger joints remain as stiff as possible yet they assist the shoulder joint in

the active work.

The effect of this tapotement is manifold. According to Metzeschen's studies it brings about a stronger circulation in the affected part, while the nourishment there of is undoubtedly increased. Under the influence of these elastic strokes a twitching of the muscle fibres occurs, extending from the part massaged throughout the entire length of the muscle. The effect of this manipulation can be compared to that of an electric current applied directly to the muscle. Finally, tapotement has an undisputed effect on the nerve endings, reducing irritability as by a strong mechanical stimulus.

With regard to the effects of this tapotement we use it: first to strengthen an atrophied muscle; second either to reduce excessive irritability of the nervous system as in many functional neuroses, or to lessen pain as in neuralgia. Should the nerve be near the surface, in such neuralgia we use a stroke like a percussion with the middle finger slightly flexed and moving from the wrist joint.

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