

has a remarkable power of soothing pain and promoting sleep.

In very thin persons percussion of the pectoralis major, as we know, produces a wave of contraction which can be distinctly seen travelling across the chest, supposed by some to be a sign of phthisis, but merely indicating a degree of emaciation which permits the muscular fibres to be readily traced beneath the skin.

In consequence of the powerful influence which this apparently simple manipulation by light stroking and percussion is capable of exerting upon physiological processes of the body, we must in its administration carefully consider the force, number and rapidity of the blows, the duration of its application and the locality upon which it is applied, and greatly vary the modes of its application according to circumstances.

As we can by means of brief and light percussion develop first a contraction, and then, by a continuance of percussion of increasing severity, a dilatation, and finally paralysis of the vascular system, so percussion will produce a similar train of effects upon the sensory nervous system. At first percussion over a sensitive nerve increases the pain, which however rapidly diminishes, entirely disappearing and giving place to complete loss of sensation. Local anæsthesia can now be produced by the Faradic current of electricity if the battery is so constructed to vibrate at so many vibrations per second. How much is due to the vibration and how much to the electrical force has yet to be determined; no doubt both contribute in the result.

The thermal effects of massage are apparent to all muscular exercise producing bodily heat. Dr. S. Weir Mitchell carefully noted the effect in many cases.

The electrical effects of massage are most interesting, and further experiment is still necessary to solve how far these delicate currents are influenced by the electricity developed in the hand of the operator, and to what extent they influence tissue metamorphosis. But that massage stimulates the electrical contractility of a muscle, I have proved over and over again. To illustrate, let me quote a case reported by Dr. Dowse before his class—a child suffering from infantile paralysis, the affected limb having a surface temperature of 70° F. The poles of a battery were applied

and eleven mill. were required to produce muscular contraction. The limb was then massaged, and the temperature rose to 95° F. The poles of battery were again applied to same points; contraction followed the employment of only five mill. It is evident, therefore, that massage diminishes the resistance of the tissues to the electrical current, and increases the electrical contractility of the muscles.

Having thus very briefly referred to the physiological effects of massage upon the system, it is in order to view the practical side of the question and consider the diseases most likely to receive benefit by its employment, and in this I must also be very brief as the field is too large for a paper, each condition being quite ample for the purpose.

I will confine myself more particularly to practical experience, and will draw your attention to three or four conditions that prove massage to be more beneficial than any other mode of treatment at the present date.

I need not take up your time by referring to its unquestioned benefit above other means in neurasthenia and all forms of neuralgia. In those conditions I think it is unquestioned, but I particularly desire to draw attention to the remarkable results obtained in all forms of rheumatism, whether acute or chronic, even to that helpless condition, rheumatoid arthritis, where the deposit in and about the joints transforms the patient into a helpless cripple. I do not refer to those extremely chronic cases where time has permitted the deposit in and around the joints to produce true ankylosis, although even in these desperate conditions all the recently diseased joints can be relieved and the disease stayed. But in rheumatoid arthritis of one to three years' duration, you would hardly credit the results obtained by steady and faithful work on the part of the masseur. I will briefly illustrate with one typical case:

Mrs. C—, aged twenty-six, came to my hospital, July, 1891; was seized with severe attack of rheumatoid arthritis in October, 1889, which confined her absolutely to bed. From then until she came under my care, the brunt of the disease was in the hands, arms and right leg, could not feed herself, six of the finger joints were completely dislocated by contraction and deposit. Remained under treatment for three months; result: complete