

tissue of the heart that the calm majestic pulsation of *health* is maintained, and never forget that *pulsation* means the heart's beats. There is another point—the *volume* of the pulse, the amplitude of the arterial stream, which can only be felt. It may by analogy be compared to *facies*, which cannot be accurately defined, and yet is so well recognised by all who tend the sick, and there are few diseases that set their mark upon the countenance more plainly than those which affect the sexual organs of woman, whether due to childbirth or other causes.

The following are some of the points respecting the pulse that touch reveals to us: it may be *quick*, but weak and compressible; *slow*, but full and strong; *soft*, showing a relaxed condition of the arterial walls, leading us to fear hæmorrhage (post partum); *hard*, from increased tension of the arterial coats, which may warn us of inflammatory mischief; thus these two opposite states have to be carefully watched in our portion of Nursing work. The *bounding* pulse is generally due to disturbing emotions, or a reckless use of alcoholic stimulants; in the former case you will generally find pallor, in the latter flushing of the face. Having brought before your notice some of the leading phenomena of pulsation, we will next discuss respiration, and then show the influence severally and collectively of pulse, temperature and respiration in diseases of the puerperal state.

(To be continued.)

PRACTICAL LESSONS IN ELECTROTHERAPEUTICS.

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LOCAL APPLICATIONS.

A GREAT variety of these are possible, and it is manifest that they must differ from each other mainly in accordance with the part on or in which it is desired to localise the current, and the nature of the trouble it is intended to alleviate or cure. We will instance applications for lumbago, for sciatica, for rheumatism in the arm, and for facial neuralgia.

In applying electricity for lumbago, the positive pole should be attached to a large pad electrode placed over the centre of the abdominal region, and the negative applied by means of a medium handle or sponge electrode to the lumbar region, being allowed to remain for some minutes over the special seat of the pain; 10 to 20 *m.a.* may

be used, or practically as strong a current as the patient can bear, and this should be passed for ten or fifteen minutes at a sitting. Such sittings may, in acute cases, be repeated twice or thrice a day. Sometimes Doctors order the coil current to be used for lumbago, and then it should be applied in a similar manner, but not strong enough to produce violent muscular contraction.

For sciatica several forms of application are used, each of which may or may not prove successful alone, and a combination of which is often advantageous. One form is to fix the positive attached to a large pad electrode upon the sacral region, and use the negative handle labile along the whole line of the sciatic nerve and its chief branches, giving special attention to the apparent seat or seats of pain. Sometimes the poles may be reversed with advantage. Another form is to use two-handle or sponge electrodes, and take the sciatic nerve in sections of a few inches from above downwards, or *vice versa*, giving one or two minutes to each longitudinal section. Another form is to use two-handle electrodes, placing them as nearly as possible on either side of the nerve, and so pass the current transversely through it in sections. Sometimes very mild and sometimes very strong currents are ordered, and no doubt each dose has its uses according to the requirements of the case. Coil currents may be used in a similar way.

Applications for rheumatism in the arm are made somewhat in the same way as those described for sciatica, care being exercised to so arrange the electrodes that the particular nerve or muscle it is desired to influence shall be brought directly in the line of the current flow. Another form of application to the arm consists in placing the hand in a basin of water (or rather warm salt and water) together with one pole, and applying the other pole to the parts concerned by means of a sponge or handle electrode, or even fixing a plate or pad electrode upon the shoulder or the brachial plexus, or some other suitable spot, and allowing the current to pass steadily for the required time. Here again coil currents may be used in the same way.

Applications for facial neuralgia require very great care, and strict attention must be given to the direction of the current. It must be remembered that the negative pole seems to possess great local stimulating power to the nerves over which it is applied; and, therefore, if, as in treatment of neuralgia, the object be to sooth and quiet an excited nerve, it is manifest that the negative pole must not come into the already excited region. A very good form of application for this trouble is to place the negative pole by means of a pad electrode on the nape of the neck, and then apply

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