

THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,
CRITICISM AND NEWS.

Original Communications.

VIBRATORY MEDICINE.*

* Lecture delivered by Professor Charcot at the Salpêtrière, Paris. Translated from the original by D. Campbell Meyers, M.D., Toronto.

GENTLEMEN,—It was in 1878, in my service at the Salpêtrière, that M. Vigouroux commenced the trial of a method of which I wish to speak to you to-day: the treatment of certain affections of the nervous system by mechanical vibrations. M. Vigouroux at first studied the effects of these vibrations on several hysterics. By means of an enormous tuning fork put in action, he succeeded in dispelling hemianæsthesia and in breaking up contractures nearly as rapidly as with the magnet or the electric spark. He also calmed the lightning pains in a patient suffering from locomotor ataxia. As the result of a number of experiments of the same kind he was enabled to establish that the vibrations of a tuning fork have exactly the same physiological actions as the metals, the magnet and static electricity. The following year Schiff arrived theoretically at the same conclusions.

These experiments were not continued, and we must pass on to the 1880 period at which a distinguished electrician, M. Boudet, of Paris, began some new experiments which led him to some very important results. M. Boudet studied especially localized vibrations, or rather those he made to act locally. He constructed a tuning fork, mounted electrically, and fitted to the board-support of the tuning fork, at the point where the vibrations are felt with the greatest intensity, a small rod of copper, about twelve centimetres long, and terminated by a disc, which was applied to the part of the body or the nerve which one desired to submit to the vibrations. The disc was of small surface dimensions to prevent the diffusion of the vibrations, but in order to localize them better the disc may be terminated by a blunt point.

The first experiments of M. Boudet were made on a healthy man, devoid of any alteration of sensibility. On applying the vibrating rod on a rather sensitive region of the skin, the supra orbital, for example, he produced in a few moments a local analgesia, and even a very marked anæsthesia, which lasted from eight to twenty minutes, varying with the different subjects.

“The same experiment tried, he says, on different parts of the body leads to a like result, with this consideration that the effects are the more rapid and complete according as (1) one acts nearer to a sensitive branch (2) the tissues have less thickness and the base on which they rest is more resistant. The greatest effect is hence obtained on the forehead, the temples, the gums, the mastoid processes, etc., in a word, on all the points where the sensory nerves can be easily compressed on an osseous surface by the vibrating disc.”

In acting in this manner one can rapidly calm diverse neuralgias, facial neuralgia in particular. The number of vibrations per minute is of little importance; it is not the same with the intensity and energy which within given limits are indispensable.

The article which he published in regard to it contained besides some other considerations, which for being less well explained are not less interesting.

“When one applies,” he says, “the instrument on one of the points (of the face) that we have just cited the walls of the cranium vibrate in unison with the tuning fork as the sides of a drum would do, and one experiences a peculiar sensation that certain subjects compare to the commencement of vertigo, and which in certain others determines a very marked desire to sleep.

“In the cases of migraine, even benign, these very rapid vibrations communicated to the cranial walls, and in consequence to the encephalon leads to the cessation at the end of a few minutes, and often even cuts short the attack when taken at its commencement. We have been able, thanks to this procedure, to ourselves avoid some attacks of migraine which paralyzed us usually for many hours, and we are certain that many dyspeptics and rheumatics afflicted with the same evil will find therein a precious remedy for their sufferings.”

M. Boudet terminates by expressing the very probable hypothesis that the transmission of the