

The defects of this method are numerous. The class of diseases to which electricity has been mostly applied by the followers of Duchenne, includes the degenerative diseases of the spinal cord, nerve-trunks, and peripheral nerve-endings. The patients especially who are subjected to the current are those who suffer from acute or chronic anterior poliomyelitis, neuritis of traumatic or toxic origin, and sometimes the victims of ataxia and other systemic lesions of the cord. The morbid anatomy of these diseases is now fairly well understood. The clinical history and termination of many of them can be predicted with accuracy. It is, for instance, well within the bounds of probability that a facial paralysis due to neuritis will recover entirely, and that an infantile paralysis due to acute inflammation of the anterior horns will leave a residuum of palsy and wasting which may be permanent. The lesion in all these diseases is destructive. The repair is by a progressive building up of new tissue—a strictly nutritive process, which requires time and favorable conditions, and cannot be done or assisted artificially, except in the most indirect way, as by the supply of food, hygiene, etc. Here is the gist of the whole matter. The question which forces itself upon the mind is whether galvanism or faradism can influence this process at all. Clinicians have answered this question almost unanimously in the affirmative, but there are dissenting voices of authority. It is hard to conceive how an electric current, applied hap-hazard on the skin of an arm or leg, can influence cell-growth in a nerve-trunk, or particularly in the spinal cord. Empirical methods and results are not to be altogether ignored, but it is, nevertheless, unfortunate that any therapeutic agent has to rely entirely upon an empirical record. This we think is the position of electricity to-day as applied to diseases of the motor apparatus, and justifies us in saying that the science has not advanced beyond where Duchenne left it.

The use of electricity in diagnosis by the reactions of degeneration has been thus far its most exact scientific result; and while we believe this test is not as widely applicable as some have claimed, it is, nevertheless, now reduced to accepted formulæ which seem trustworthy, and promise to be permanent.

In spite of what we have said, we think electricity, as a therapeutic agent, has a bright future in some departments of practice. We refer now to its dissolvent action by electrolysis. We wish to indicate here briefly a few cardinal principles upon which some of its advocates do not sufficiently rely, and of which some of its determined foes appear to be completely ignorant.

The power of a galvanic current to break up into its constituents a fluid medium, such as water, through which it may be passed, is one of the ele-

mentary facts of electro-physics. This power is exerted equally upon more complex fluids, such as solutions of chemical substances, and also upon organic fluids, such as blood, serum, milk, etc. Finally, it is exerted upon organized tissue. Thus water is resolved into hydrogen and oxygen, as may be readily observed upon passing a mild current through a tumbler of this fluid. In compound fluids or salts the acids seek the positive, while the alkaline bases go to the negative pole. The subsequent chemical actions of these acids and alkalies are just the same as would be the case if they were introduced from without, and constitute the secondary action of electrolysis. Now, the important point which therapeutists have too much neglected is this, that these changes are in exact quantitative relation to the strength and duration of the current,—that is to say, with so much current strength continued a certain time (or, technically, with so many *coulombs* of electricity), just so much hydrogen, oxygen, or what ever the simple atom or compound radicle may be, will be liberated. In such a simple fluid as water the figures of this problem are exactly known, but in such a complex series of organized tissues and fluids as exist in the human body (while doubtless, the changes are just as constant and according to law) the figures are not known. It thus appears very evident that the power of electricity to break down organized tissue is not only indisputable, but that it may even yet be reduced to an exact dosage, and that it thus fulfils the first requirement of exact science,—conformity to law.

We are perfectly aware that electrolysis in surgery becomes a practical question,—i. e., whether it can compete with the knife? Into this rather vexed question we do not propose here to enter. Several most important issues are involved. Can it be always controlled with perfect safety to surrounding parts? Is it expeditious, clean, and attended with little pain? Can it be rendered antiseptic, or is it already so? Several indications are imperative. The dose must be adequate and must be applied direct, and not allowed to diffuse widely through the skin and mucous membrane; hence puncture is probably always preferable. Finally, the dosage must be studied with care to supply data for reference. That certain fibroid tumors, bronchoceles, nævoid growths in vascular regions have been successfully treated in this strictly scientific way is without doubt.—*Ed. Therp. Gaz.*

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RECENT REMEDIES EMPLOYED IN PERTUSSIS.—Dr. Stepp has published a second article on the treatment of whooping-cough with bromoform. In one hundred cases treated there was not a single failure. He gives the bromoform pure in one-drop doses in a teaspoonful of water. On account of its