

*Trophic disorders.* These two cases are examples of paralysis of the fifth nerve, that have not up to the present, at the end of two years, been accompanied, in one of the patients, with scarcely any trophic troubles, and in the other with only disorders (in the nutrition of the eye) caused only by external irritation (dust arising from a special kind of work.)

*Muscular Contractility* The two observations which serve as a basis for this memoir, are further examples of long persistence of the muscular contractility, in addition to those already given by Legros and Onimus; the author remarks, also, that in his two patients, the muscles innervated by the facial and deprived of their only sensible nerve, were found more excitable on the paralyzed side, either to the faradic or the galvanic currents.

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ARE THERE TASTE FIBRES IN THE CHORDA TYMPANI?—C. A. Carl, *Archiv. der Ohrenheilk.* X. 152. (Abstr. in *Centralbl. f. d. Med. Wissensch.*)

Since his earlier youth, the author had suffered from inflammation of the middle ear, the consequence of a combined attack of diphtheritic inflammation of the throat, and scarlet fever. The tympanum was almost destroyed, and the mucous membrane of the labyrinth wall in the tympanic cavity was in a cicatricial condition. Audition was seriously affected; the functions of the facial and trigemini were intact. Sensibility was retained over the anterior two-thirds of the left half of the tongue, and by irritation of the chorda tympani in the aural cavity, a prickling sensation was produced on this anterior side of the tongue. On the other hand, the sense of taste is entirely destroyed on the left side of the tongue in its anterior two-thirds. With the additional fact, that after mechanical irritation of the chorda tympani in the middle ear, a very notable salivary secretion was observed from the left *caruncula salivaris*, it seems improbable to the author, that the gustatory fibres in the minute cross section of the chorda tympani could be alone destroyed, leaving the sensory and secretory ones intact. He comes rather to the conclusion that there was no lesion of the nerve. On the other hand, there are other nerves in the aural cavity, the destruction or injury of which may be accompanied with loss of the sense of taste. The filaments connected with the tympanic plexus, a branch from the petrosal ganglion of the glossopharyngeal enters the tympanic cavity through the tympanic canaliculus, and meets twigs from the trigemini which reach here by way of the *processus superficialis minor*. In chronic disease of the middle ear, this plexus is involved. But since, on the other hand, clinical observations make it almost certain that some gustatory fibres exist in the course of the chorda tympani, the author calls in to explain this fact, an actually existing connection of the geniculate ganglion of the facial with the tympanic plexus, to which a branch from the sphenopalatine ganglion of the trigemini is given through the inferior superficial petrosal nerve. The manner, also, in which the author thinks the taste fibres reach the anterior portion of the tongue from the brain is as follows: they first enter the lingual branch of the trigemini and while the greater portion of them reach the glossopharyngeus via the otic ganglion, the inferior superficial petrosal nerve, the tympanic plexus, and petrosal ganglion, a

variable number turn into the chorda tympani, pass through the tympanic cavity, join the facial nerve, and pass with it centripetally to the geniculate ganglion; hence, as communicating branches from the facial to the tympanic plexus, thus entering the middle ear a second time, and uniting with the fibres from the otic ganglion join the glosso-pharyngeal nerve.

In conclusion, the author shows that the sensory impressions from irritation of the chorda tympani in the middle ear, on the corresponding sides of the tongue, are only felt on the margin of that organ.

RESEARCHES ON THE SENSORY NERVES.—The following is the substance of a recent short article by M. Ch. Richet, in the *Gaz. des Hopitaux*, June 1.

The phenomena of sensibility are more difficult to appreciate, than those of motricity, and we have hardly any criterion to tell whether an animal feels or not. The author has used strychnine for this purpose, the employment of which with the reservation kept in mind, that it does not indicate the state of all the sensibilities, but only that of the excito-motor is the best method we possess for this purpose.

To study the phenomena consecutive to the natural death of a nerve; he prepared a frog, by dividing all the tissues of the thigh, leaving only the sciatic nerve intact. Following this operation, there was first a slight super-excitation soon succeeded by a gradual diminution of sensibility, from the periphery toward the centres. When ordinary excitants like contact, heat, etc., are insufficient,—electricity will still act upon the nerve,—the electric sensibility still persists.

In a frog thus prepared, death usually occurs in seven or eight hours. The sensory nerve dies before the motor, since while an excitation of the anæmic sciatic does not cause tetanus of other parts, that of a sound one does produce it, not only in the injured parts, but also in the prepared leg, the nerve of which has lost its sensibility but not its motor power. Death may be hastened, not only by electrizing the nerve itself, but also, by exciting any part of its periphery with strong induced currents. There appears to be, in this case, a series of nerve currents exhausting the sensibility of the nerve by their rapid succession.

In studying the different action of various sensory excitants according to their intensity, M. Richet lays down the following as the laws of sensory reaction.

1. Sensibility increases, if the excitant is feeble.
2. It undergoes alternations of increase and decrease, if the excitant is of moderate intensity.
3. It decreases, if the excitant is strong.

These three propositions, he says, may be verified in man, not only for the electrical excitant, but also for others. Thus for pressure, he employs a pincette constructed by M. Collin. If the pressure is slight, the pain, at first moderate, becomes more severe, the pressure remaining the same, with strong force used, the reverse follows. With electricity the result is still more striking.

It is interesting, says the author, to investigate whether the motor nerves