AN INAUGURAL DISSERTATION

ON

"The Portus Dura or Facial Nerve"

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Portio Dura or Facial Nerve

The class of nerves to which the above belongs, comes off from the base of the brain. There are nine pairs, and are divided into nerves of special sensation, of common sensation, and of motion. A nerve is an organ of sensation or motion. In our treatise upon the nerve, we wish to notice its anatomy, physiology and pathology. To begin its anatomy, we notice it arising from that portion of the brain, known as the Medulla Oblongata, in the groove between the Corpora Oliare and Corpora Vestiformes. It passes forwards along the Oros Cerebelli, and comes in relation with the auditory nerve, with which it enters the Meatus Auditory internus, lying first to the inner side and then upon that nerve.
It enters a canal in the bottom of the Meatus internus expressly intended for it, and directs its course forwards towards the hiatus Fallopii, where it forms a gangliform swelling and receives a small branch from the vidian. It then curves backwards towards the Tympanum and descends along the inner wall of that cavity to the Stylo-Maxillar foramen, through which it emerges into the Parotid gland, enveloping the external jugular vein and external carotid artery, and at the ramus of the lower jaw, divides into two trunks, the Temporo-facial and Conico-facial. The trunks immediately split into numerous branches, which form loofed communications with each other, and various anastomoses with the fifth, and spreads out upon the side of the face; the Temporo-fa-
cial upon the upper half of the face and Temple, and the Aurico-facial upon the lower portion of the face and Neck. Before the Nerve divides into these trunks, it gives off a posterior auricular branch which ascends behind the ear, and communicates with filaments of the Premandibular, and sends branches to the external ear. It gives off a branch also to the Stylo-hyoid Muscle, and another to the Diagonal Muscle. Within the aqueduct of Fallopii it gives a branch to the Stapedius, and another to the chorda tympani, which passes through the ganglia to the opening in the parea, and joins the gustatory Nerve. Enclosed in its sheath, it descends into the submaxillary gland and unites with submandibular ganglion. This Nerve is dependent upon
The sight for a perfect knowledge of the muscles over which it presides we next notice the Physiology of this nerve. First being directly connected with the Brain it acts as a Medium, and gives us expression which has been said to be an Index to the Mind, owing to the many States of which can be made known by it, and from the further fact, that we can judge of the natural turn of Mind which an individual possesses. In the loss of this then, while it would not involve the loss of any of the vital functions essential to life, would deprive our race of their original beauty and perfection. While this is very desirable and should be the constant care of the Surgeon to preserve, it is not of the same importance as other care.
quences which would result from a division of this Nerve. We consider that of
respiration of paramount importance. In ordinary respiration this Nerve is
not called into play; but when, by
exertion of the body, the circulation
is increased, and a proportionable
amount of nutrition is required, the
muscles over which this Nerve resides
is brought into play. That this is
so, is proven by the daily experience
of every one, though one can not prop-
erly appreciate it until this Nerve
is paralyzed. Now this modification
of respiration, is, directly under the con-
trol of the will, and can be varied to
suit any emergency. Paralysis of this
Nerve, that would deprive it of its in-
fluence in respiration, would involve
the loss of the proper exercise of, if not the functions of the two Special Senses Smell & Taste. We would be unable to draw air briskly up to the Olfactory Nerve, and it would not respond to Odors, unless they were so brought. The lips would flap loosely, and food would lodge between the cheeks and gums. The angles of the Mouth would hang down motionless, except in an attempt to blow or whistle, when they would be moved by the expired air. This being the case, we would lose the powers of Speech, not being able to move the Lips to Modify Sounds. By such paralysis, we would also lose the powers of lightening up the Face with a Smile, and Depression would be very materially interfered with.
not so much, however, as paralysis of the branches of its distribution to the eye, for by this one can express the emotions of the Mind; after we are deprived of the power of Speech. Here, for this nerve the eye would remain open, foreign matter coming in contact with it, would cause thickening and consequent opacity of the Cornea. The tears would run down and exsudate the cheeks. The face would present a characteristic vacant look, and the eye an unmeaning stare, and consequently the power to make known the States of the Mind would be lost, for this is the only Medium, through which it conveys its mandates. Its Origin from the Brain is marked in the groove between the Corpus Olivare and Rectiforme.
the fibres of which diverge and converge to form the cerebrum and
vertebrum, which are regarded as the center of the cerebral sys-
tem of the nerves of special sense, and of solution of the in-
tellect, and of the passions of
pleasure and of pain. By its means
are placed in relation to all that
is external. We believe the brain to
be the seat of the mind, and
that impressions made upon
the brain, develops the mind
and this development constitute
the intellect. If then this nerve
is directly under the control of
the mind, and guards all the
channels through which impres-
sions can be made upon it.
Mind by external objects, is not its perfection necessary, in order to the recognition of impressions, of which the mind can take cognizance, as well as to the proper exercise of all the organs of special sense. We have noticed the distribution of this nerve to all the muscles concerned in respiration and deglutition, and the consequences of its division to both. When one side of the nerve is paralyzed, and the other lightened up with a smile, the paralyzed side is greatly exaggerated. Notice now the other distributions of this nerve. The movements of the internal ear that appreciate the undulations of sound, depend altogether on this nerve, yet we cannot modify its action. Neither can we that of the palae, the movements of which dep.
ends upon this nerve. These distributions call for another classification, as we have no control over them. Division of the branch distributed to the ear would involve the loss of its function, and as a consequence the power of speech from the man not being able to hear himself speak or others speak to him, he would soon cease communicating with his friends in this manner.

There is a branch of this nerve which descends, with the stomatopharyngeal, to the pharyngeal division of which would not only affect the power of speech, but the function of the organ of taste, in so far as it depends upon the sensation of solid substances.

We have now noticed the distribution of this nerve.
its play in enabling the Organs of Special Sense to perform properly their functions, and the consequences of its division. We have adopted the classification of those authors, who regard this as a division of the Sensory Brain, and also as a Nerve of Motion. Now as a Nerve of Motion it should not be regarded independent of the fifth Nerve, because, as already stated, it is dependent upon it, for a knowledge of the Muscles which it presides. In paralysis of this Nerve one would in the first place lose the impression of the States of the Mind and with it the power of the Mind to convey impressions to
the Brain. So we would not only suffer physically but mentally. The proper exercise of the functions of the Special Senses would also be interfered with, if not lost. If such a state of things was not followed by death, it would deprive us of all of which it would be desirable to live; especially to the lover as he can no longer hear the footfall of his intended, nor read the emotions of her mind in her face, nor see the beautiful rose gay, nor listen to her musical voice. Then, let us as sages wisely preserve it, that we may not detract from the happiness of our fellow men. Respectfully,

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