AN IN AUGURAL DISSERTATION
ON
Paralysis of the Third Nerve of
Served Consecutive to Alzalga
of the Fifth Nerve.

SUBMITTED TO THE
PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY
OF THE
University of Nashville,
FOR THE DEGREE OF
DOCTOR OF MEDICINE.

BY
James L. Hiles

OF
Alabama

185
W. T. BERRY & CO.,
BOOKSELLERS AND STATIONERS,
NASHVILLE, TENN.
The Paralysis of the Third Pair of Nerves Consequent to Hernalgia of the Fifth Pair.

The nerver has been the subject of frequent inquiry whilst investigating the local predominance of symptoms of many diseases. But as yet, they have not received that separate and isolated investigation which their importance demands. Their pathological state in disease is undiscovered, and the relation which may exist between any given malady and an uniform alteration in the respective nerves has not been satisfactorily demonstrated. Our error and ignorance upon this
points may be attributable to the fact, that we assign to the nerves offices entirely too limited. Our medical writers frequently compare the nerves to telegraphic wires, which transmit intelligence to and from the central organs. Thus making them more passive agents, answering no purpose in the physical economy that that of conductors. Such a comparison is exceedingly mistaken, as it circumvents in a very limited manner the physiological action of the nerves, and is calculated to set a quietus to this kind of investigation.
in any particular nerve or set of nerves as distinct from symptoms, and to treat disease with a strict reference to this morbid state is an incognita in theory or practice. If the nerves do not take on inflammation as other organs and present and present such an appearance upon an autopic examination, it is set down as a stubborn Medical Truth that they are not susceptible of disease but act only as conductors of morbid impressions. As an instance of this kind, Dr. Albers tells us that he examined the bagi in forty-seven Children who
died of whooping cough, and found them perfectly normal in forty three. He would have us to understand by normal, that they were not edema distemper and swollen, the two essentials to an abnormal state in the minds of this physician. The investigations and deductions are of the same class. And so of many others, they begin the investigation of the nerves of all Padua with the expectation of discovering inflammation, and if this is not discovered they reach the conclusion immediately, that the nerves are not diseases. They first forester theory and afterwards deduce
erroneous conclusions from nature and facts to surmise it. It is
erroneous to suppose that all the parts of the human organism
are even susceptible of like pathological changes. It is not
less erroneous to suppose that we can discover every pathological
change by an actual examination
of the dead subject. Many
changes must necessarily take
place in the living subject
which will not be manifest
upon the dead. Gravitation is
known only by its effects, so
are many pathological states
of the different organs made
manifest by symptoms and
signs on the living subject.
In elucidation of the position assumed we will examine in a short way a relationship which exists between paralysis of the third pair with neuralgia of the fifth. Trigeminal neuralgia has been little studied as regards the disorders which it produces beyond the nerve it affects, but which form a very interesting and curious part of its history. It is truly remarkable that a lesion, limited to a few filaments of the fifth, can, by a retrograde repetition of Moschis actions, propagate itself to the nervous centers and induce the
Most extensive, multifarious, and serious accidents, such as the loss of speech or power of deglutition, excessive dysphonia, dysphagia, violent convulsions, emphysema, furor delirii. That these fearful symptoms are due to simple division of some of the trigeminal filaments, is evident from the fact, that when they are divided by section extending to the bone, the accidents, which may have resisted all medical appliances, disappear immediately. It could hardly be supposed that such great disturbances of sensibility and
Motion were dependent upon an old Contusion of a fine nervous filaments.
Let us examine a case of this kind. A gentleman of a very nervous temperament, was the subject of paroxysmic pains of dreadful violence on the left side of the head and face, especially in the vicinity of the supra-orbital foramen, and in the latter of the upper jaw. The left eye became affected with diplopia, but presented no deviation from its normal direction. The sensibility of the left cheek was entirely gone, as also of the nostril.
although he could still perceive odors. He could open his jaws only to a very slight extent. Compulsion of the frontal nerve caused great pain but immediately and as long as it was continued the epiplastic ceased. This compulsion could not be employed as a remedial means in consequence of the great pain it gave rise to. But the patient obtained considerable ease during a paroxysm by introducing a small piece of wood between two of his teeth. Blisters, purgatives and stimulating being used, the pain was partially relieved and sensibility restored.
but the diplopia remained
and the globe of the eye be-
came smaller, and drawn
inwards, the upper eyelid be-
ing also paralysed, so that the
eye was kept shut.
In this case it is very evident
that the paralysis of the fifth
pair preceded the paralysis
of the third. But the qu-
estion naturally arises, what
is the explanation of the oc-
currence. The tricepsus nerve
and Common Motor oculi
nerve—in the ophthalmic gan-
glion, the former furnishing
it the sensitive root by the
nasal branch, the latter the
motor root from its inferior.
branch. A reflex morbid action may take place within this ganglion by which the affection which is expressed in the sensitive nerve by pain or anaesthesia, is transmitted to the motor nerve, in which it is expressed by convolution or paralysis. The symptomatology of the motor, as of the sensitive nerves, is of two opposite states; pain and anaesthesia for the latter, convolution and paralysis for the former. This hypothesis is consistent with the most plausible theory of the functions of the nervous ganglia; true miniature brains, as
they have been called, for the regulation of special actions; receiving impressions by filaments continued from the sensitive roots, and conveying these by the motor filaments; presiding over the nutritive phenomena by their grey fibers, and only advertising the brain, from the locality, under extraordinary circumstances. In this way the ophthalmic ganglion, in particular, would be affected in the relations prevailing between the retina and the iris, and certain muscles.
of the eye. Advertising of the capabilities of sensibility of the retina by its connection with the optic nerve, it reacts upon the iris harmonizing the pupil according to the degree of sensibility of the retina, and acts reflectively by its motory root upon the muscles of the eye which are influenced by the thalamus.