with impaired function dependent upon paresis, or paralysis of the sympathetic nervous system, without inflammation, without structural change in the blood-vessels, without molecular death? This question opens up the question of contractions, dilatation, erectility and reflex vaso-motor effects. The function of the vaso motor nerves most frequently called into exercise is contraction.

Fox says, "The motor nerves that preside over the muscular contraction of vessels, and rule the local circulation, are the nerves that issue mainly from the ganglia of the great sympathetic, creep along the arterial walls, and can be followed into the middle muscular coat of the arteries. The vaso-motor apparatus therefore is in a state of permanent activity, never in repose, never inert. The muscular tunic of the vessels is in a state of semi-contraction—in other words, of vascular tone. Variation in this tone will be the necessary consequence of various modifications of the nervous apparatus."

The vaso-dilators are also in a constant state of action but are fewer in number than the contractors. Were it not for the pressure and action of the vaso-dilators, the vaso-contractors would cause undue and complete contraction of the vessels. The arteries possess both elasticity and contractility; the small arterialis contractility only. The vaso-contractors and dilators acting together keep up the proper calibre of the vessels.

When from the presence of some irritant upon the vaso-motor nerves, or as the result of mental impressions, etc., by reflex action, the vaso-motor nerves become affected, lose their tone, the ganglia soon loses its power, paresis, or partial loss of power takes place, the vessels dilate and remain dilated. As the result of this ganglionic paresis, we have *redness* from the increased afflux of blood to the part, we have *swelling* from increased amount of blood in the part, and after some time from the excessive nutrition furnished the tissue, the *pain* being produced by the pressure upon the sensory nerves, the *heat* from the rapid and excessive flow of blood through the part, we do not have changes taking place in the vascular walls. In the experiments made by Petit, Bernard, Brown-Séquard, and others, to which allusion has been made in this paper, it was shown that by removal of the ganglia, or section of its nerve filaments, that the part of the body supplied from that ganglion had an increased flow of blood into and through the part. That there was considerable increase of temperature, *redness* and *swelling* of the part, and, no doubt, *pain*. That there was increased secretion and nutrition.

In conclusion. When we take into consideration the anatomy and distribution of the sympathetic nervous system, together with its physiological functions, and its pathological action under artificial impairment, is it not reasonable to sup-

pose that if a ganglion becomes impaired and loses its power that we might have such conditions taking place that would explain a number of the phenomena occurring in diseases of organs or other parts of the body supplied by the great sympathetic nervous system?

Would it not explain many of the functional brain troubles? of eye, ear and nose, pharyngeal and laryngeal troubles. Pneumonia can be more easily explained in this way than in any other. Some heart, stomach, and kidney troubles can be explained by sympathetic paresis. Gynecological troubles lose half their terror when viewed from this light.

We all are aware that in the cases of troubles mentioned recovery is more rapid and complete when treatment is directed to the sympathetic nervous system.

A PLEA FOR THE BETTER RECOGNITION OF THE OCULIST IN THE SERVICE OF THE U. S. PENSION DEPARTMENT.

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty-Ninth Annual Meeting of the American Medical Association, May, 1888.

BY JOHN W. WRIGHT, M.D.,
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The U. S. Pension Department has been established for the purpose of remunerating those who have become disabled while in the service of their country by reason of injury, sickness or deprivation.

While the Government is endeavoring to provide for these persons, it becomes necessary to guard against impostors, for the recompense is amply adequate to induce those who are so disposed to make the effort to obtain it. For this reason boards of examining surgeons and special agencies have been established throughout the country, as well to enable the deserving to procure what is justly due them as to prevent others from obtaining that which does not belong to them.

At present the applications for this beneficence are in great profusion, for the reason, perhaps, that many of the older ones who served in the late civil war mistake their physical impairments from age for disabilities from wounds and exposures from army life; while others who received injuries while in service or suffered from the sicknesses and privations consequent to a camp life, although not considered at the onset sufficiently disabled for a pension, have developed with increasing years diseases and infirmities which have rendered them confirmed invalids.

It is doubtless the design of the Government authorities that the machinery of the Pension Bureau shall be as complete as possible; for the nearer it approaches perfection the more will the

chances for fraud be diminished, hence every application receives the most careful and deliberate consideration at the hands of this department.

The Medical Referee, in his instructions to examining surgeons, states that (Art. 5) "the object of a medical examination is to obtain a full and complete description of the disabilities for which pensions are claimed, and to gain a *clear and distinct idea of the extent to which they disable in the performance of manual labor.*" (Art. 6.) "To this end it is necessary that *every disability existing* shall be fully described," etc.

Under the heading of "*Diseases of the Eyes,*" (Art. 58) we find: "In all diseases of the eyes involving internal structures the ophthalmoscope must be brought into use, otherwise the examination is of little value."

In closing the instructions the medical examiners are reminded "that the interests involved in pensions are of such magnitude as to demand the employment of the very best skill this country can supply." The term "a full and complete description of the disabilities" is sufficiently significant to indicate the desire of the head of the medical department.

That "the ophthalmoscope must be brought into use, otherwise the examination is of little importance," is pertinent; but could the department have fully comprehended the necessary knowledge of optical principles and the constant and unremitting practice which underlie a correct application of this instrument, in order to be able to detect the various pathological conditions in eye affections, I do not believe this last clause of instructions would have been imposed upon medical gentlemen of whom not one in every hundred can realize the practical value of this instrument. This may seem to many an exaggeration, yet I believe every oculist here will bear me out in this assertion. Nor is this intended to reflect upon the abilities of examining surgeons—for there is not an instrument of diagnosis of such incalculable value, in my estimation, so difficult of application as the ophthalmoscope.

In making this entreaty, a few cases which have come under my immediate observation may be in place.

A gentleman living in the eastern part of Ohio, who served his country during the War, made an application for a pension because of a disease of the eyes which rendered him almost blind and incapable of earning a livelihood.

He was ordered before a board of examiners, and in due time he received a pension and considerable back pay. Some time afterward he was induced by his friends to consult me in reference to his eyes. I found that he had entropium, which had followed what he termed the "army sore eyes." There was no complication or structural disorganization of the parts, the inflammation being simply mechanical, the result of the hairs

which were constantly rubbing against the balls.

I informed him what could probably be done and, seeing an opportunity of giving him great relief, I encouraged him with the possibility of considerable improvement in his vision. I saw that he was not favorably impressed with my opinion, and I naturally presumed that he did not have the confidence in my ability to accomplish that which I had given him encouragement could likely be done. I afterward learned that he had *too much* confidence in my ability to help him. He feared that the operation would prove so successful that he would be compelled to relinquish his pension. Afterward, upon making inquiry, I was surprised to learn that he had obtained his pension because of "glaucoma."

Mr. B. had served considerable time in the army. Four years ago I operated upon one of his eyes for cataract, he being blind in both eyes. The operation proved very successful and the patient returned to his former occupation—that of a contractor—which he had been compelled to relinquish almost a year before the operation, and which he now manages with very little inconvenience.

Not long since he got into the hands of a pension solicitor and was easily made to believe that his blindness had been the result of sickness and exposure while he was in the service. He "*did* remember of having had the jaundice while in camp," and how "*yellow*" his eyes looked. "This was doubtless the key to his blindness."

An application for a pension was at once made, and in due course of time he was ordered to appear before the board of examining surgeons. One of the examiners who makes some pretensions to a knowledge of eye diseases and the use of the ophthalmoscope was delegated to examine all such applicants, and accordingly examined this gentleman's eyes.

An elaborate examination was at once commenced, and the ophthalmoscope was brought into vigorous use. An hour at least was consumed in the examination. Of course the opaque lens was seen in the eye which had not been operated upon, or I presume it was, as the ophthalmoscope was made to play upon it at least one-half of the time; and in the other eye the cicatrix where the incision had been made in the upper part of the cornea, and the irregular-shaped pupil, were plainly discernible, and excited the interest of the surgeon.

The surgeon inquired what had happened to the eye. Evasively he was answered that "some doctor had been trying to operate upon it." The examining surgeon then ventured the remark that it had been "*badly butchered,*" and advised him not to allow the other eye to be "meddled with," or he would be left "*entirely blind.*" The applicant has received, I understand, a comfortable pension.

Of course it is impossible for us to say that the applicant's jaundice, together with his other sicknesses and exposures in the service, *did not* cause or contribute in some way to the opaque condition of his lenses, although his mother and a sister, who were not exposed to these influences, were both blind from cataract.

Although the origin of a disability is considered a legal matter; that is, a thing to be determined by evidence obtained outside of the medical examination, yet the examining boards are largely entrusted with the duty of distinguishing and separating disabilities of origin either before or after enlistment from those which occurred during the actual service.

In the above case the opinion of any reputable oculist, doubtless, would have precluded a pension.

A gentleman from the southern part of Ohio came to my office a few years ago and desired me to make an examination of his eyes and give him a written opinion. He made the statement that while in the army he had had sunstroke, and with it the loss of an eye. He was discharged and sent home, not on account of the loss of the eye, but because of his general physical disability which followed the sunstroke.

A few months after returning home, while engaged in some work requiring physical exertion, he suddenly lost his sight in the other eye. He was now practically blind, although not *entirely* so, for he could grope his way around to a better advantage than if he had been totally blind, but he was so blind that it was impossible for him to distinguish one object from another, or to be able to perform any labor that could not have been accomplished by a blind man. He had made several attempts to procure a pension, and had been ordered before different examining boards; but for some unaccountable reason to him he had never been able to obtain it. Finally it came to his ears that it was intimated by some persons that he was a malingerer, and it was to contradict this report and to place himself in a proper standing among his friends, rather than an aid in procuring the pension, that he desired the examination and a written statement concerning the condition of his eyes.

The examination with the ophthalmoscope revealed the fact that there had undoubtedly been very extensive retinal hæmorrhages involving the maculæ in both eyes. The hæmorrhagic spots had been unquestionably very numerous, as there were many places marked by choroidal alteration or replaced with blackish pigment. In other places the retinal tissue seemed to be degenerated and marked by a whitish or grayish tinge. There was such complete destruction of the retinal tissue that it was impossible for him to more than know that an object was in front of him in good light. I gave him a certificate stating the facts, since which time I have heard nothing from him.

I do not recollect of ever having seen or heard of retinal hæmorrhage caused from sunstroke, but, owing to the engorged condition of the sinuses and veins of the brain during the active stage of the affection, it is readily understood how it could occur.

The second hæmorrhagic attack can be explained because of the tendency of recurrences of cerebral engorgement after sunstroke, marked by sudden depressions upon exposure to heat or bodily exercise.

It is fair to presume that the surgeons who had examined him took into consideration the external appearances of his eyes, and had overlooked their retinal condition.

As oculists are generally aurists, the following case which refers to the hearing is permissible:

A young man enlisted at the beginning of the War and was in active service most all the time until its close. He was in many engagements where there was heavy cannonading. When he was discharged he was somewhat deaf, and grew gradually worse for ten years following, at which time it was almost impossible for him to understand the loudest talking. Since that time he has remained in this condition.

About eight years ago I saw him, when he was making an effort to obtain a pension. He came to me because I had known him before he entered the service, and also because, he said, he had consulted me in reference to his deafness immediately after his return from the army. I have, however, no record or remembrance of his consulting me at the time mentioned by him, but from an incident which he referred to as having occurred at the time, I presume he did. At any rate I was not able to testify, as he desired evidence to establish the time the deafness began and its continuance, in order to associate it with the exposure to the heavy cannonading during the service.

Having no record of the examination I made eight years ago, I am not prepared to give the details, yet I am confident I found no appreciable lesion, because of an opinion I formed of his case at the time, and which I have had in my mind ever since, relative to the cause of his deafness.

I came to the conclusion that there was an ankylosis of the joints of the bones of his ears. These bones, as we all know, are, or should be, freely movable at their joints, although delicately attached to each other. Their articulating surfaces are covered with cartilage and connected with capsular ligaments, and lined with synovial membrane, the same as the articulating surfaces of other bones, and are no doubt liable to the same diseases as the larger joints. These joints are so adapted as to allow of the motions of the bones conveyed to them through the membrana tympani from ordinary sounds, and they perform their functions perfectly well and without injury to themselves under these conditions. But heavy

cannonading would cause, through this membrane, excessive action of these joints. Then why is not a synovitis just as likely to be induced here as it would be in the larger joints, where it is so liable to end in an ankylosis?

But it matters not whether the deafness is caused from an ankylosis of the bones of the ear or, as some authors would have it, in case of boiler-makers and others subject to like noises, that it is due to nervous exhaustion from continued shock, or, as explained by others, from chronic catarrh of the middle ear; it is quite sufficient for us to know that cannonading has been the cause of very much and intense deafness.

In this case it is impossible, perhaps, to establish an unbroken chain of evidence from the time of the inception of the injury until very marked deafness ensued, from the very fact that slight deafness, or what is termed dulness of hearing, is not very noticeable except to one's most intimate friends or associates. When the patient is no longer able to distinguish ordinary sounds, then it is noticeable to all.

Evidence that this man was exposed to heavy cannonading during his service, and that the deafness now exists—in the absence of lesions that would indicate that the deafness was not the result of army exposure—would be sufficient grounds for allowing him a pension.

If, as expressed by the Medical Referee, "the interests involved in pensions are of such magnitude as to demand the employment of the very best skill the country can supply," then it is nothing but just that *all* applicants claiming defect in sight or hearing should be referred to boards of examiners composed solely of experts in this particular class of affections.

The number of applicants claiming defect in vision alone would justify this. From July, 1886, to December, 1887, there were 4,672 pensions granted for disabilities of the eyes. As about 12 per cent. of all applicants during this time received pensions, then there was the enormous number of 39,000 applications in this class alone.

In concluding this argument I disclaim any selfish motives more than a desire that our profession may be the means of promoting the interests of many worthy applicants, and of increasing the efficiency of the Pension Department by contributing the very best skill for the examination of this particular class of applicants.

OXYPIPERIDIN, a substance derived from the distillation of benzolamidovalesteric acid, is very similar to strychnine in its action, being a strong tetanizer. The crystals of oxypiperidin melt at 30°–40° C. They are soluble in water, alcohol, ether and dilute acids. When oxypiperidin is boiled with strong acids the non-toxic substance α -amidovalesteric acid is formed.

A CASE OF PLACENTA PRÆVIA.

Read before the Medical Society of the District of Columbia, April 25, 1888.

BY PHILIP MARVEL, M.D.,
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The subject of this report, Mrs. S., was a colored woman *æt.* 38, of medium height, small in stature, much reduced and emaciated by phthisis pulmonalis; married, one child 13 years old; no miscarriages, and had been in expectancy for some seven months when seen first by me.

According to her own statement, she had been ill of phthisis about two years, the physical signs of which were quite advanced. Through the kindness of Dr. Muncaster, who was attending her at the time for a slight uterine hæmorrhage, I was asked to take charge of her case. A second hæmorrhage occurred some three weeks later, though of little consequence so far as related to the quantity of blood lost.

My suspicion at once was that I had to deal with a case of placenta prævia, though an examination added little to strengthen or verify such a suspicion. The mouth of the womb was well closed, and quite impossible for me to insinuate my finger sufficiently far, within the cervix, to ascertain a placental offering without forcing dilatation, the expediency of which I shall have more to say further on. Principally rest, with little medication, was quite sufficient to check the flow, and my attention was then directed to the upbuilding of her general condition. Nutritious foods, good air, bromine and dilute phosphoric acid constituted the principal means employed. These were apparently effecting the results I had desired, and while waiting an opportune time to induce labor, I was called to see her with another hæmorrhage. Though not profuse, it was alarming, owing to the prostration it occasioned. For some time after my arrival, the hæmorrhage having been checked, she was unable to converse, and only slowly rallied under careful administration of stimulants and artificial heat. At this time there was no longer a question as to the condition, but a grave one, as to the most expedient procedure. To attempt a speedy delivery would be to employ means positively dangerous, and possibly to destroy the little chance that remained for her recovery. I packed the vagina, having previously inserted within the cervical canal a pledget of cotton, and gave my attention to the effort to restore her from the effect of the shock—the result of which was so transitory and unsatisfactory, that it was evident neither a conservative nor radical course of procedure was without danger.

Dr. Reyburn was now asked to see her with me, and found her substantially as above described. I attempted forcible dilatation with the fingers, but found her strength insufficient to bear it, and again we resorted to the tampon and waited dilatation, watching her all the time, and employing such