

liferation of the over-acting mucous glands and cells of the deeper tissues, soon leads to enlargement from hyperplasia of the tissues involved, which may be regarded as a true compensatory hypertrophy. This change is first and most markedly shown in the tissues opposite the greatest concavity of the deflection, which in the majority of cases is on a level with the lower turbinal body. Such hypertrophy may continue so far that it becomes excessive, causing considerable obstruction of the nostril. This compensatory hypertrophy of the tissues, through increased activity of function, is not peculiar to the nasal chambers, for it has been observed in many other organs of the body, as, for instance, the marked enlargement of a kidney after the destruction of its fellow. Such tissue, however, by reason of its hyperemia and excessive functional activity, and, when in the nasal chambers, its exposure to mechanical irritation from dust, vapors, etc., is peculiarly liable to the inflammation. These inflammatory changes cause an increase in the interstitial connective tissues, with a gradual destruction of the glandular appendages, which eventually leads to an atrophy of the affected parts. This atrophy is usually first noticeable in the lower turbinal, and continues until the affected nostril is much widened in its lower and middle meatus. This increasing atrophy and lessening functional capacity of the lower turbinal causes a greater demand on the rest of the glandular tissues of the affected chamber, and the middle turbinal soon commences to enlarge and extend downward in the effort to fulfill the great demands on its function. The inflammatory changes, before noted, in the lower turbinal, now, in turn gradually occur in the middle turbinal. Its anterior end, being particularly liable to irritation, frequently becomes granular and polypoid.

The mucous membranes lining the accessory sinuses are from the first affected by the increased function and become hyperemic, irritated and inflamed. Sooner or later, as the various inflammatory changes take place, the nasal chamber becomes septic. This usually occurs after the atrophy of the turbinals is somewhat progressed. The parts then present a picture of marked atrophy of the lower turbinal, atrophy associated with polypoid degeneration of the middle turbinal and mucopurulent discharges from the accessory sinuses. Thus the pathologic changes in the unobstructed nostril, in a case of marked deviation of the septum, may be divided into three stages. The first stage, that of hyperplasia of the tissues from over-function, is a compensatory hypertrophy; the second is that of atrophy from inflammatory changes, and the third that of atrophy associated with sepsis of the nasal chamber and accessory sinuses.

When the septum is but slightly or moderately deflected, the pathologic changes cited are present in a much less degree, for both nostrils still respire, although not to an equal amount. In such moderate deflection a slight compensatory hypertrophy of the turbinals of the more open nostril may be the only pathologic change noticeable.

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**ELECTRIC TREATMENT OF NEURALGIA.**—Velasco describes (*Revista de Med. y Cir. of Havana*) several cases of severe neuralgia of the lower jaw, etc., cured in a few sésances of galvanization with the positive pole applied to the painful region. In one case the pain was so severe that speaking and mastication were both impossible, swallowing very painful, the escape of saliva from the open mouth continuous. One treatment produced a great improvement and cure was complete in 3 months.

## DILATATION OF OPHTHALMIC VEIN: CURE.\*

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I will give a brief résumé of an operation which I was called on to perform in a case of dilatation of ophthalmic vein, and which, to my gratification, proved successful.

My patient was a resident of Eagle Pass, Texas, a woman of 32 years of age, married, vigorous, and the mother of five children. The first of these died at the age of 5 months, of hydrocephalus, the second at 2 months, of "fever," and the third at 17 months, also of "fever." The fourth and fifth, both girls, aged respectively 4 years, and 5 months, are now living and in good health.

The patient, referring to the illness in which my services were solicited, stated that on Dec. 21, 1898, she was attacked by la grippe; from this date a humming began in her left ear; Jan. 1, 1899, she noticed that the sight of her left eye was becoming weak, and shortly succeeding that time the affection of the conjunctiva of that eye commenced.

I first saw her on January 18, and after obtaining from her the data given above, I proceeded to the thorough examination which the case demanded, finding a noticeable exophthalmic tumor of the eyelids and neighboring regions, accompanied by immovables and livids, with the conjunctiva strongly congested, and forming a burning wheel between the eye and the lower eyelid, which was so depressed as to prevent its elevation. The tension, the cornea and the iris were normal. (I did not make the ophthalmoscopic examination, because I had not the instruments with which to do so with me, nor, indeed, did I intend doing so afterward, because of the patient's delicate condition, and the lack of proper surroundings.) This, in addition to the very intense pain which she complained of, stating that it extended to the whole side of the head and face, and even to the nape of the neck, explained to me the insomnia, want of appetite, etc., from which she was suffering, and convinced me of the existence of a tumor on the back of the eye.

Suspecting that it might be a recto-ocular abscess, I proposed an examination under the influence of chloroform, to which, however, she would not accede. I then prescribed iodid of potassium, two grams daily, and bichlorid of mercury in lukewarm applications, myself administering an injection of morphin with atropin.

On the next day, the 19th, her condition was worse. I was then compelled to say that if they persisted in refusing to agree to the operation I had proposed, I would feel it incumbent on me to withdraw from the case. They agreed, therefore, to come to some conclusion in the matter within twenty-four hours. In the meanwhile I prescribed a continuation of the treatment then being tried, with the addition of two portions of chloral of two grams each, to be used in case the pain became intolerable. On the 20th, Dr. Duggan administering the chloroform, I introduced the bistoury in the external angle of the eye, coasting the surface of the socket as far as the cuspis (caruncle), which resulted in the flow of about sixty grams of blood. Next I made a careful examination with a blunt stiletto, but found no pus, and then made some shallow incisions in the conjunctiva, ordering the continuation of the former treatment.

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When the patient recovered consciousness, she expressed great relief, which improvement was maintained for two days, when her condition became worse than it had been before. Suspecting, then, a venous dilatation, and, also, as the vision of that eye was lost, a hypopyon having appeared with the additional symptoms of sympathy in the other eye, I proposed enucleation, which was agreed to.

On January 30, Dr. Duggan again administered the chloroform, and I availed myself of the Volkman spoon No. 1, to load and overset the ocular globe, because the nippers failed to grasp either conjunctiva or the tendon which was tearing it, and the spoon enabled an easier enucleation. I next proceeded to the examination of the cavity, and ascertained that there was dilatation of the ophthalmic vein of about one centimeter. I then abandoned the idea I had of binding the vessel that formed the aneurysm, as, having been prevented from giving the other treatment proposed by the authors, I was forced to leave matters as they were, which I particularly regretted, because, not only would the dilatation increase greatly through need of compression, but also the troubles consequent thereupon would follow, and probably result in the need of a further posterior operation. Fortunately, however, both for my patient and myself, I remembered the advice of Dr. G. Laurens, when the lateral breast comes open when ascending the mastoid prominence, and this seemed to be a similar case, notwithstanding the fact that he referred to the opening of the breast by accident, while in this instance it was through intent, besides which I had the advantage of being able to compress it by reason of a bony surface behind the vessel. The resolution was quickly followed by the operation. With a compress of bichlorid gauze in my left hand, and the spoon in my right, the dilatation was pulled out, producing a copious flow of blood. This, however, did not alarm me, as I expected and was prepared to control it, and did immediately, by compression with the gauze I held in my left hand. I immediately requested Dr. Duggan to assume charge of the compression, while I proceeded to thoroughly clean the operated part. I then raised the level of the compression above the borders of the orbit, placing over these a silver dollar to equalize the pressure at the center, and admit of free circulation in that locality. I then placed a thick wrapper of cotton and antiseptic bandage thereon.

After twelve days I removed these appliances, which had been retained all the while without producing any disagreeable odor, through my having kept them dampened with a solution of formol. There was a sudden hemorrhage, caused by the tearing of some fleshy blood clots. I applied a little glutol with fresh wrappers of gauze and cotton to the outside, which I held in place with a tight bandage. On February 17 I again removed this, without further flow of blood, applying a little glutol as before in the socket of the eye, with a gauze covering, but without a compressing bandage.

On February 20 I was again called in, the patient complaining of a slight pain, which she feared would increase. With the object of relieving this, and hastening the cicatrix retraction, I prescribed the insertion of fifteen to twenty drops of a weak solution of tannic acid and cocain. On the 28th I found everything progressing excellently, the patient informing me that she had discontinued the use of my last prescription after two days, because she had ceased to experience the trouble. Not a drop of pus was found after the removal of the bandages.

There remains at present, as the only trace of the severe illness, a slight humming noise in the ear, which

she states has already greatly diminished, and during a good portion of the day disappears entirely, enabling her to sleep without difficulty.

As another incident, which may be of interest, I would mention the following: On Oct. 17, 1896, two partners and myself were called into consultation with Dr. Duggan, who was attending a brother of the patient referred to above. Having discovered that he was suffering from venous varices of the floor of the mouth, we suggested intervention, to which the family would not agree. He died the following day of asphyxia. He was 32 years of age.

*Deductions.*—It is undoubtedly true that the members of this family are predisposed to vascular dilatations. It is probable that the dilatation of the vein was somewhat lengthened in the interior of the skull, which produced the humming of the ear mentioned before. The cure was doubtless due to the suppression of the more extended part of the vein, and the formation of coagulated blood in the balance of the dilatation, and the presence of the gauze in the open extreme, and the lengthening of the coagulation to the walls of the vessel, which was proved by the complete cessation of the humming noise.

#### SOME OF THE ASPECTS OF RENAL INADEQUACY FROM A NEUROPATHIC STANDPOINT.\*

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The subject of renal inadequacy, a term first used, I believe, by Sir Andrew Clark, has become of more and more importance as we have grown increasingly familiar with the effects of autointoxication, and have learned to recognize how great a part the retained products of metabolism—especially those which result from incomplete retrograde change—play in the inception of diseased conditions heretofore attributed either to other causes or looked upon as arising *de novo*. This condition of the kidneys, I believe to be represented in the inability of these organs to completely eliminate the waste products of the body, either because they are themselves the seat of disease or because the products of destructive metabolism come to the kidney in such form chemically, as to be unable to pass through the renal epithelium or to complete their elaboration into those compounds which can be secreted and excreted by the functional portion of the tubules. There are many ways in which this inadequacy can be brought about, but let us first consider the function of the kidney and its relation to the welfare of the rest of the organism. If we accept the current teaching of physiology as to the structure of the epithelial lining of certain portions of the tubule, the kidney is a secretory as well as an excretory organ and has something to do with the elaboration and reduction of the compounded elements which are brought to it by the blood. Next to the brain, the kidney receives a proportionately larger and more direct blood-supply than any other organ, and the blood-vessels are so arranged in their final distribution as to expose the largest possible surface in contact with the functional part of the organ. It receives its nerve-supply from the same sources, both ganglionic and spinal, as the other abdominal viscera, and is surmounted by a glandular structure of whose function we know nothing accurately,

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