ARTICLE XVII.

RESTORATION OF FUNCTION OF SIGHT IN AN EYE AMBYLOPIC FOR YEARS.

BOTH EYES EXHIBITING VARIOUS DISEASES OF THE EYE, WITH TREATMENT. By WILLIAM S. LITTLE, A.M., M.D., of Philadelphia.

It is rarely the opportunity is afforded of seeing in one patient such a variety of diseases of the eye as the following case exhibits. It presents two of the causes of divergent strabismus depending on the eye alone, the treatment for vitreous opacity in one eye, and an ulcer of the cornea in the other; and the benefit derived from the correction of optical defects existing, and from a tenotomy of the tendon of the external rectus of each eye. The eye upon which vision had depended became useless, and the other eye, which was amblyopic and had undergone the lesions of myopia for years, became the useful eye.

The treatment required therapeutical, surgical, and optical measures. The mechanics of the ocular muscles are also presented.

Mr. W., æt. 33, was seen Sept. 1879, suffering from an ulcer of the cornea of the left eye, and an amblyopic condition of the right eye, vision reduced to counting fingers at two or three feet with both eyes.

He was also annoyed with diplopia resulting from the condition existing. He was led about for fear of accident. General health poor. Myopia prevails in his family, and several members have a divergent strabismus dependent on it.

Further, his right eye has a divergent squint and has been useless since early childhood; his left eye is near-sighted, and he has been compelled to wear glasses since a boy. In Oct. 1863, while in the army, a powder-magazine exploded near him, rendering him unconscious for three days, no injury to external parts, sight and hearing affected for a few days, remained in hospital for three months; sight and hearing became as good as they were before the explosion. The external rectus of right eye was divided in 1873, with no permanent result, the vision of the eye being so defective; no correction was given to his optical defect. In July, 1879, eight weeks prior to consulting me, a solution of ammonia, F. F., accidentally got in the conjunctival sac of the left eye, the one upon which vision depended, setting up a severe kerato-conjunctivitis, and destroying a portion of the cornea to the inner and lower quadrant, penetrating to almost the middle of the thickness of the cornea. Zinc and lead-water were used; vision was reduced to perception of light in the eye, and with the chronic conditions in the right eye he was reduced to almost blindness for a time. While the left eye was suffering from the acute conditions, he observed in a few weeks that he could begin to perceive objects with the right eye, and it gradually improved; the left eye still remained very irritable, and assumed the condition of ulcer of the cornea. With the return of function of sight to the right eye he was annoyed with diplopia, and when the left eye was closed he could not depend on the right eye.

On examination, the right eye presented a wide divergent squint, no ability to turn it inwards; to see directly in front he had to turn his head to

the left. Ophthalmoscope showed a myopia of one-fifth with myopic astigmatism; a posterior staphyloma, the disc, and staphyloma had the appearance of a double disc overlapping slightly and reaching toward the fovea. A large vitreous opacity also existed towards nasal side; the loss of field of vision corresponded principally to the opacity: when it passed before the fovea he was rendered momentarily blind; it presented the lesions found so frequently with uncorrected myopia. The left eye presented a loss of substance of the cornea at the lower and inner quadrant with ragged ulcerative edges, bloodvessels running into it from the conjunctiva; general opacity existed over the whole cornea, no iritis had occurred; the lachrymal sac had also been invaded with the solution of ammonia. There was profuse lachrymation, pain, and photophobia.

The treatment began by correcting the optical defect for the right eye, as, by forced use, it had commenced to perform its function — $V = \frac{2}{C}$. I

ordered a — 5C — 24cyl ax 45° $V = \frac{15}{XL}$.

The eye was to be treated with atropia, and for the vitreous opacity, I gave internally potassium iodid. and hydrarg. bichlor.

For the left eye I ordered hot water applications and atropia, and an ointment of yellow oxide of mercury. As vision improved the diplopia became more annoying; on Oct. 13, I divided the tendon of the external rectus of the right eye.

Oct. 15. Right eye in position $V = \frac{15}{XXX}$; vitreous opacity smaller; the fog, he said, seemed to be disappearing, and was not so constant.

22d. Left eye with a — 8 $V = \frac{15}{LXX}$.

25th. Used eserine for left eye, instead of atropia.

Nov. 1. R E, $V = \frac{15}{XXX}$; L E, $V = \frac{15}{L}$.

As vision improved in each eye, he using the right principally, the left began to deviate to the outer canthus.

Jan. 26, 1880. R E, $V = \frac{15}{XV}$; L E, $V = \frac{15}{XXX}$; pupil dilated.

The cornea had filled up considerably, and what opacity was present was largely due to the lead that was used while the epithelium of the cornea was denuded.

Right eye showed few shreds of vitreous opacity, not so migratory, and not annoying.

He walks alone, reads and writes with right eye. It was interesting to watch the progress of restoration of function of sight in the right eye; he said he had to learn all over again to judge of place, distance, and relation of objects to each other with the right eye; and finally, he was able to shave, which was the most difficult thing for him to learn. It was as difficult for him to train the right eye as it would have been if he had lost a right hand, and had to train a left one to do the work.

March 26. R E, $V = \frac{15}{XV}$; L E, $V = \frac{15}{XXX}$; treated continually.

April 9, 1880. While holding the eye clinic at the Jefferson Medical College Hospital, during the spring and summer course, I divided the tendon of the external rectus of the left eye to remove the divergence that

followed as the result of the opaque cornea with the myopia existing. The result was satisfactory; with a dilated pupil he can control objects singly.

Oct. 1880. I find patient in a good condition, able to attend to work, but depending on his right eye for full and effective vision; he is able to control single vision by an effort, but has slight diplopia at times; with a dilated pupil of the left eye, so as to avoid the opacity, it then disappears.

The cause of the divergence of the right eye was due to the myopia, that of the left to the opacity of the cornea, along with the existing myopia. The vitreous opacity in the right eye may have had some influence on the divergence of the eye; but the divergence, no doubt, antedated the opacity.

NO. 219 SOUTH SEVENTEENTH STREET, Oct. 8, 1880.

ARTICLE XVIII.

CONSECUTIVE LIGATION OF THE COMMON CAROTID AND SUBCLAVIAN ARTERIES FOR SUPPOSED ANEURISM OF THE INNOMINATE. AUTOPSY THREE YEARS AFTER THE LAST OPERATION. By LEWIS A. STIMSON, M.D., Surgeon to the Presbyterian and Bellevue Hospitals, New York.

IN the Wood Museum, Bellevue Hospital, New York, is a preparation made from the body of a man whose right common carotid and subclavian arteries had been tied, the one four years, the other more than three years, before his death. The preparation was made with the special object of showing the collateral circulation, and as such is believed to be unique of its kind. The dissection was not carried far enough to clearly show the condition of the aorta and innominate, and Prof. Wood, while appreciating fully the importance of a knowledge of the condition of those vessels, feared that any attempt to ascertain it after the preparation had become dry might break the injected arterial branches. Quite recently, however, he has directed a more complete dissection to be made, and, as autopsies made months or years after operations of this kind are few in number and important to the formation of a correct opinion concerning the value of the operation, I desire to place this one upon record. The case is one referred to in an article by myself on "Simultaneous ligation of the carotid and subclavian arteries," published in the *American Journal of the Medical Sciences*, July, 1880, note on page 68, and is no. xxv. in Dr. Wyeth's list of "Cases of distal ligature for aneurism near the heart," published in the same journal, January, 1881.

The patient, Peter M., 48 years of age at the time of his death, noticed in Oct. 1875, a small lump in his neck above the inner end of the right clavicle; it increased within a week to the size of a hickory-nut, and Nov. 1, 1875, the carotid was tied by Dr. Doughty at the Homœopathic Hospital. A copy of a description of the operation, furnished by Dr. D., forms part of the record of the case made during the patient's subsequent stay in