

vessels on the right were quickly clamped. A supra-vaginal hysterectomy with double salpingo-oöphorectomy was performed. The raw areas were quickly covered with peritoneum, and a gauze drain was passed through the vagina. The abdominal wall was sutured in layers, and a cigarette drain to the pelvis was allowed to come out at the inferior angle of the incision.

The patient was returned to her room in fair condition; she was put on the Murphy drip, and digalen mxv. was given every four hours hypodermically.

July 12, 1916, the noon temperature was 100, pulse 96. She complained of slight pain in the abdomen; 8 p.m. the same day the pulse was 96. July 13, 1916, the vaginal drain was removed; no bleeding present; slight distention, relieved by a high compound enema. July 15, 1916, cigarette drain removed; the patient feels well. July 21, 1916, stitches removed; the incision is healed except for the drainage tract, which is filling in fast. July 25, 1916, the patient out of bed on the 13th day after operation. August 1, 1916, *Discharge Note*—The abdominal incision is well healed, except for a small, superficial, granulating area in the drainage tract; no induration, no tenderness. The vaginal examination presents a healed slight laceration of the perineum; the vaginal drainage area is well healed; the cervix is high; there are no masses or areas of tenderness in the pelvis. August 1, 1916, discharged from the hospital. December 6, 1916, the patient reports that she is doing her housework, and feels well, except for an occasional backache. June 4, 1917, the patient has continued to improve, feels well, and does her housework without any discomfort.

CONCLUSIONS.

The operation which was performed for retro-position, three years previously, had apparently been intended to be a Kelly ventral suspension. The latter operation consists of suturing the fundus of the uterus to the parietal peritoneum, allowing a central ligament to form, which holds the uterus in a forward position. This latter procedure does not interfere with labor, when properly performed. At the present time the round ligament suspensions have largely replaced it.

The result in this case proved to be a ventral fixation, which represents an entirely different condition, and which practically always interferes with labor. In the operation for fixation, as the name implies, the fundus of the uterus is fixed to the abdominal wall.

Had the case been seen earlier in labor, or even before the rupture of the membranes, an abdominal Casarean section would have been, in my mind, the operation of choice. This, however, was out of the question when the patient was seen, firstly, on account of the conditions noted above, and secondly, because she sent for her physician only when well advanced in labor, so that he recognized the prolapsed cord upon his arrival.

The fact that the patient was sent to the hospital for immediate delivery, the readiness with which she was prepared for a coeliotomy, with the subsequent saving of blood, were largely re-

sponsible for her easy convalescence, and complete and rapid recovery.

The writer has had the opportunity of witnessing and assisting Dr. James W. Markoe of the New York Lying-in Hospital, in a hysterectomy for ruptured uterus with satisfactory recovery. Dr. Ross McPherson in the Bulletin of the same institution, April, 1916, reports a case of spontaneous rupture of the uterus treated by hysterectomy. The patient also recovered.

Medical Progress.

REPORT OF PROGRESS IN OPHTHALMOLOGY.

By EDMUND W. CLAP, M.D., BOSTON.

HYPOPYON KERATITIS.

VERHOEFF discusses the various forms of treatment recommended for hypopyon keratitis. This is due most often to the pneumococcus and next in frequency caused by the diplobacilli. The author's method of treatment is as follows: With the patient lying down and a speculum in the eye, the ulcer is brought to face directly upward. With a Beer's knife incisions are made in the ulcer as deep as possible without entering the anterior chamber. A crucial incision is made in small ulcers; in large ones, in addition, radiating incisions are made. The infiltrated border of the ulcer is curetted with the point of the knife, and the surface of the cornea about the ulcer dried with small, dry swabs of sterile cotton. A concentrated Lugal's solution—iodine 25, potassium iodide 50, and water 100—is applied on a cotton-tipped toothpick to the ulcer, and after this is moistened a pool is formed in the ulcer and allowed to remain five minutes and then flushed out by a jet of boric acid solution. A rubber bulb with this solution should be in readiness in case the patient moves the eye, for the iodine solution injures the epithelium of the cornea. In cases of small ulcers the Lugal's solution is applied without making the incisions, depending on severity of the infection; when in doubt the incisions should be made, because when the ulcer heals no trace of them remains. In rapidly progressive cases Verhoeff makes a small puncture through the center of the ulcer with the Beer's knife. The puncture is not large enough to evacuate the hypopyon, and that remains to hold iris and lens away from the opening. This puncture causes some pain. Bandage, mercuric chlorid ointment, and atropine are used as after-treatment. If no improvement appears in seventy-two hours the treatment should be repeated. Forty-two cases were treated in this way. The process was checked in all but 5 cases, these having one-half to two-thirds of the corneal surface involved. The average age of the patients with small ulcers was 39 years; of the patients with larger ulcers, 50 years.

ANISOCORIA.

Tarun examined 3610 patients as to inequality in size of pupils. He has the patient seated in a dark room at least two minutes and reflects the light from a plane mirror at a distance of one meter, rapidly shifting from one eye to the other. A difference in size of the pupil can readily be recognized. In refraction cases having no intraocular lesion, 18.54% were anisocoric and the left pupil larger in 54% of these. Of myopic cases the greater myopia had no especial influence on size of pupil. From statistics of various reports, the author finds that in 66% mydriasis is more frequent on the affected side in lung and pleural affections. From 18% anisocoria in normal eyes we pass to a maximum of 70% in Argyll-Robertson pupil.

The author concludes that inequality of the pupil is of little importance when the pupils are active to light and when there is only a slight difference in size, and in some cases even where a marked difference exists. But if there is reflex rigidity or sluggishness, then inequality in size is of great diagnostic value.

TETANUS FROM WOUNDS OF THE EYE.

From a review by Thompson and Stephenson we gather the following about tetanus due to wounds of the eye. Goetz concludes that it is rare, but reports 50 cases in wounds of the eyeball, orbit, eyebrows, upper lid, lower lid and conjunctiva, in this order of frequency. Infection due to wounds by earth or by equine dejecta, rarely operative. Prognosis is grave in proportion to: (1) rapidity of onset, (2) depth and degree of contamination of wound (3) lateness of beginning serum treatment. Schneider estimates 60 cases observed between 1816-1916 and reports 2. Trismus, difficulty in swallowing and paralysis of cranial nerves are early symptoms, and diagnosis is often overlooked by the ophthalmic surgeon. Schneider cites 19 cases where the wound of entrance was the eyeball, and of these 9 were due to a blow from a whip. Four cases followed operations on the eye. Of the 19 cases only 3 recovered.

TRACHOMA.

Gifford calls attention to occlusion of the inner end of the canaliculus in old trachoma. He tried 15 cases and found only one in which at least one of the canaliculi was not occluded. Generally all four are found to be in this condition, with from one to four dilated and containing pus. Occasionally a canaliculus is occluded at both ends with a dilated pus-holding portion between them. In such cases the tear-point may look normal, but if a dilator be passed into the canal and withdrawn pus will be seen to follow it. This condition often is supposed to be a dilated tear sac full of pus. There is so much else wrong with lids and cornea that the lachrymation is looked upon as a result of the irritable

cornea, and yet the recurrent corneal ulceration may be due to repeated infection from this source. The suppuration will cease if the canaliculi are slit up and kept open and a zinc colyrium used. It is difficult to maintain an opening into the tear sac, but there is no disadvantage in allowing the connection with the sac to remain closed. The nasal duct is not, as a rule, obstructed.

SPASM OF ACCOMMODATION.

Paton reports two cases of that rare condition—functional spasm of accommodation. He does not mean by this the tonic contraction occurring in hypermetropia to compensate the refractive error, but a sudden development in one or both eyes of a high degree of apparent myopia, which disappears under atropine. It may be continuous or clonic, and may be associated with spasm of other ocular muscles. In one patient at 5 years of age there was 1.50 D. hypermetropia in each eye, with occasional convergent strabismus. At 15 there had developed divergent strabismus of the left eye, which was tenotomized. A few months later refraction was about -75 right and -2 left eye. Four months later myopia of -7 right and -9 left, and this varied. Under atropine, right -5 , left -1 , but the spasm of accommodation reappeared when atropine was omitted. Since then her eyes vary from slight spasm up to -9 or -10 D. The second case was in a soldier seen 5 months after a slight concussion of the brain.

ASTEROID HYALITIS (T. B. HOLLOWAY).

Under this name Benson described snow-white globular opacities in the vitreous. These spots are globular, many ellipsoid and dull white, not shining like cholesterolin. A few have a projecting spur, while white strands are also noted. The movement of these opacities is sometimes very slight, sometimes extensive on movement of the eye, but they do not settle to the bottom of the vitreous, but return to their original positions. They may be in certain areas or the whole vitreous may be studded with them. Vision is affected very little, even where the vitreous is abundantly filled with these opacities. They do not seem to be cholesterolin, though they may be formed at some stage of the same process that produces cholesterolin. Synchysis scintillans is a condition of advanced years ascribed to diseases of the liver, arthritis, alcoholism, syphilis and arteriosclerosis. It has been found with uveitis, affections of retina, changes in optic nerve, glaucoma, and traumatic detachment of the retina. Among the reports of synchysis scintillans several cases of this snowball type are reported, once with the bright cholesterolin crystals present, too. The author reports four cases and says probably other cases have been grouped with true synchysis scintillans. The etiology is unknown, but apparently hypercholesterolemia has no relation to it.

HETEROCHROMIA IRIDIS (E. C. ELLETT).

This is a condition in which the whole iris of one eye is of the same color, but the color is different from that of the other eye. This condition, not rare, usually in brunettes, is noticed at birth or before maturity in the majority of cases. The difference in color may arise either from absence of pigmentation on one eye or from destruction of pigment through some pathologic process. The lighter colored eye is the one almost without exception where the pathologic process occurs. These changes are: (1) low-grade cyclitis, limited to vitreous opacities and occasionally deposits on back of cornea; (2) development of cataract; (3) occurrence of glaucoma simplex rarely. The underlying cause has been supposed to be a lesion of the cervical sympathetic, but experimental work has not shown much influence of the sympathetic on the eye, nor have injuries of the cervical sympathetic been followed by this condition. Of course a chronic uveal inflammation would account for the change in color of the iris, and pathological examination has shown many cases to be due to chronic iridocyclitis. Cases of uveitis with increase of tension are sometimes helped by atropine, but others occur where this drug increases the tension. The author reports in detail 12 cases, 5 of them with glaucoma.

MYOPIA.

From the *British Journal of Ophthalmology* we take the following review of work on myopia. Koster thinks school myopia is caused by heredity and over-exertion. These eyes are suffering from a chronic sight chorio-retinitis. By effort of accommodation the eyes are made hyperemic and the posterior part of the globe becomes ectatic. Pollock employs prolonged use of atropine in treating myopia, and has observed not only no increase in many cases, but also some cases of actual decrease in the myopia. On the other hand, Sidler-Huguerin thinks that myopia cannot be arrested nor its degenerative changes stopped. His study of 4000 myopia patients revealed disease of the macula in 218, and of these the myopia was less than 10 D in 49. Corneal maculae were found in 187. The writer thinks that myopia gradually increases, whatever we do to combat it, and that full correction is not always capable of preventing the increase. From radiographs he has satisfied himself that there is no close relationship between the contents of the orbit on one side and the refraction of the eye on the same side. He reports a series of 150 anisometropes, each of whom used practically only one eye. These patients gradually became more and more myopic in the worse eye, which was not used. He considers heredity as the most important factor in myopia, and thinks the only remedy is in proper selection of individuals for marriage.

END-RESULTS IN INTERSTITIAL KERATITIS.

Derby examined 96 cases of interstitial keratitis with regard to the end-result, and 94 of these had the disease in both eyes. Except in a very few instances the inflammation had come to an end at least two years previously, so that the visual results may be regarded as reasonably permanent. Corneal opacity of greater or less density was seen in 168 eyes, while in 14 none was observed. Of 186 eyes examined for blood vessels in the cornea 171 showed them. Posterior synechiae were present in 62 eyes. In 4 eyes slight opacity of the lens was left. Vitreous opacities were seen in 11 eyes, but in 38, either from contracted pupil or corneal scars, this examination could not be made. In 148 eyes 81 showed lesions of chorioid and retina, mostly disseminated rounded lesions in the equatorial region. As to vision, the patient, usually a child, may have one good eye, so that statistics as to the number of eyes defective may be misleading. From the standpoint of education, 24 children would have the same chance as a normal child; 25 more could study normally, but might be handicapped in choosing an occupation; 20 or possibly more would have to be educated in special classes or in institutions for the blind, as certainly the remaining five would be. Of course myopia may develop later; it was noted in 19 of 80 cases. Igersheimer's statistics are worse than this; 40% of his cases had a vision of less than 2/10. Derby believes the great majority of cases of interstitial keratitis are due to inherited syphilis, and that recurrences do occur, and that specific treatment should be used for the future good of the patient, if not to control the eye disease.

EFFECTS OF RADIANT ENERGY ON THE EYE.

Verhoeff and Bell have made an exhaustive experimental investigation into the pathological effects of radiant energy on the eye. This valuable work does not lend itself to abstraction but should be read in full, but some conclusions of interest to the ophthalmic surgeon may be quoted. The authors set out to discover what pathological effects can be produced in the structures of the eye by exposure to artificial or natural sources of light, viz., by radiant energy of medium wave-lengths from the infra-red to the ultra-violet. The authors show that no injury to the retina can occur from ultra-violet light, even from the most severe exposures. Thermic effects from any source are not to be considered as no one could bear extreme heat radiation on the external eye long enough to produce damage. Using sources of light employed for practical lighting, but of immensely greater intensity than would ordinarily be used, they found no chance of damage to the retina. The heavy arcs for welding; furnaces and short circuits, and possibly searchlights, present the only danger from the standpoint of thermic ef-

fects. No sources used for lighting can be called dangerous. Brilliant sources of light are disagreeable and produce temporary scotomata, disturbances of color vision, annoying after-images and fatigue, but as regards definite pathological effects or permanent impairment of vision from exposure to luminous rays, nothing of a positive nature was found, either clinically or experimentally. The injury to the retina in eclipse blindness is entirely thermic, due to concentration of solar energy by the refracting system of the eye, and is not due to ultra-violet rays. Glass-blower's cataract is due not to ultra-violet light, but probably to the overheating of the eye as a whole, with consequent disturbed nutrition of the lens. The lens screens the retina from abiotic radiations, so that protective glasses for this purpose are superfluous. The question of protective glasses for the ordinary individual is answered by choosing those best adapted to obviate the sensations arising from too strong illumination; any glass that reduces light will do, but preferably a glass that transmits light chiefly in the middle of the spectrum for which the eye is customarily focused. The color of the glass is of little importance. Glasses absorbing at both ends of the spectrum so as to bring the strongest light in the region of greatest luminosity, viz., the yellow-green, are perhaps to be preferred.

Book Reviews.

The Medical Clinics of North America. July and September, 1917, pp. 193 and 269. Philadelphia and London: W. B. Saunders Company.

The initial number, July, 1917, of this new publication in the field of medical clinics supersedes the older Medical Clinics of Chicago, the final number of which appeared in May, 1917.

The plan of this new periodical is unique in that it calls for a bi-monthly magazine, each number to contain a collection of papers and post-graduate clinic from one of the great medical centers of the country.

The first, the Johns Hopkins Number, contains contributions by Doctors Janeway, Barker, Mosenthal, Fitcher, Hamman and Brown. The papers cover a wide range of internal medicine, and the subjects are handled in an essentially practical and informal manner.

Dr. Janeway presents a short clinic on "postural albuminuria," which is of very distinct value. The discussions of hypertension by Dr. Mosenthal and Dr. Hamman present the modern conception of this condition in a particularly sane and interesting manner.

Dr. Barker in his clinic on "atrial fibrillation" gives an excellent discussion of the sub-

ject, including prognosis and treatment. Against the commoner conditions with which the number is mainly concerned, two very unusual conditions presented by Dr. Hamman, one, "dermoid cyst of the mediastinum," two, "Milroy's Disease" stand in contrast.

The number closes with some gastro-intestinal notes by Dr. Thomas R. Brown concerning "gastroptosis," "chronic appendix," and the medical after-care of surgical patients following abdominal operation.

A gratifying feature of this excellent number is the incorporation in some of the papers of a brief and up-to-date bibliography.

The September, Philadelphia, Number contains papers and clinics from sixteen authors, drawn from various Philadelphia hospitals and clinics. It is impossible to comment on all the interesting material, but attention may be called to the contribution of Dr. Pancoast on "The Diagnosis of Pulmonary Tuberculosis by the Roentgen Ray," well illustrated by skiagrams as an excellent discussion and a clear statement of what x-ray may be expected to do, and also its limitation in this condition.

Dr. McCrae's paper on "Aortitis" calls attention to the importance of infectious diseases as a frequent cause, and emphasizes the two great tendencies to regard syphilis as the sole etiological factor.

Dr. Schamberg contributes a short but comprehensive paper on "The Causes of Reaction after Salvarsan."

Dr. Kolmer's discussion of "The Diagnostic Value of Examination of the Cerebrospinal Fluid" describes clearly the worth-while tests and their significance.

On the whole, it is fair to say that the excellence of the first number has been maintained, and if the same standard is carried out, the series will make a valuable addition to this class of medical publication.

The Surgical Clinics of Chicago. October, 1917. Vol. I, No. 5. With 84 illustrations. Published bi-monthly. Philadelphia and London. W. B. Saunders Company.

This paper volume, in the usual shape, contains 100 pages, and cases from 16 surgical clinics in Chicago; it includes the well-known names of Bevan, Ochsner, Ridlon, Halstead, Harris, Wylls Andrews, Plemister, Percy, Beck, Eisendrath and Speed, and other equally able, though possibly not so widely known, operators.

Dr. Ochsner finds it well worth his while to write on the somewhat plebeian subject of "Varicose Veins," and presents a very good discussion on it; Dr. Ridlon writes on "Hip Disease," and Dr. Bevan on "Tumors of the Breast, Benign and Malignant."

The volume is well illustrated and worthy of study.