DISEASES OF CORNEA

ABSTRACTS

I.—DISEASES OF CORNEA


(1) Seefelder gives an account of the histology of a congenital staphyloma of both eyes in a six days’ old cat. In both eyes the staphyloma occupied a symmetrical position and involved the greater half of both corneae. The tissue of the staphyloma was composed of newly-formed tissue in which the pupillary portion of the iris and the pupillary membrane were completely involved. The staphyloma was distinctly separated from the rest of the cornea by a definite zone of demarcation. There was a purulent infiltration of the cornea and this extended to the iris and ciliary body. No trace of the lens could be found in either eye. The retina showed in both eyes in nearly its whole extent a duplicate formation of the external nuclear layer. The case proves that there really is an intra-uterine suppuration of the cornea, an occurrence which has been doubted and even denied from many sources. The absence of the lens and the doubling of the nuclear layer of the retina can be considered as a consequence of this process (casting out of the lens and the formation of folds in the retina due to shrinking and unequal growth). With regard to the cause of the inflammatory process nothing could be discovered.

S. Spence Meighan.


(2) Wright has found iridectomy useless in most cases of extensive staphylomata. He, therefore, practises the following operation: The eye is decompressed in the same way as in corneoscleral trephining except that a disc is removed at the margin of the staphyloma so putting the posterior chamber—when it exists—into direct communication with the subconjunctival tissues. The flap of the conjunctiva is replaced in the usual manner. A fine-pointed electric cautery is then used to make a number of radiating scars from the centre to the periphery of the staphyloma, and a more thorough umbilicated cauterization is done at the centre.
The staphyloma shrinks up during the next few weeks. Should there be even a small area of transparent cornea, the region adjoining it is selected for the trephining because it may be possible under such circumstances to leave an iridectomy which gives the patient more light. The cornea has rarely to be split, one merely dissects up the conjunctiva until it is impracticable or dangerous to go further. The after-treatment is by instillations of saturated aqueous solution of picric acid and the use of boric ointment and a pressure pad. The bandaging is kept up for several weeks.

F. A. WILLIAMSON-NOBLE.

(3) Bussy, Leopold.—Myxoma of the cornea. (Le Myxome de la Cornée.) Arch. d'Ophthal., January, 1925.

(3) "Tumours of the cornea containing mucoid tissue and labelled, rightly or wrongly, myxomata, are rare." After this opening sentence Bussy refers to six reported cases; of these he eliminates three, expresses doubt about the fourth and accepts only one, that of Mitvalsky, as genuine.

He reports a case in a man, 66 years of age, under his own observation, giving the clinical features and notes of a thorough histological examination of the growth. He feels justified in describing it as an interstitial myxoma of the cornea. A short, but apparently complete bibliography is appended.

J. B. LAWFORD.


(4) Chou's case is of interest because, in a sense, it supports Verhoeff's theory that tubercle bacilli may pass through the pars ciliaris retinae in leucocytes and endothelial cells, and be carried on by the aqueous to infect the filtration angle. Pathological examination of an eye removed for iridocyclitis revealed tuberculous nodules in the lower periphery of the cornea and in the filtration angle. The spaces of Fontana and the canal of Schlemm were markedly infiltrated with epithelioid cells and lymphocytes, and, in the lower quadrant, this infiltration was directly connected with the corneal nodules. The iris was not much affected, there were some nodules in the ciliary body and the choroid was normal. There was, however, definite infection of the sclera, especially in its deeper layers, though, clinically, there was no evidence of scleritis. Chou's opinion is that the primary focus was in the sclera, the infection being blood-borne.

F. A. WILLIAMSON-NOBLE.

Whitham summarizes current literature to the effect that epithelial dystrophy of the cornea occurs most frequently in middle age, usually affects females, is often associated with slight transitory rises of intraocular tension, and that the course of the degeneration and diminution of vision is progressive, despite any known form of treatment.

In a case examined by Fuchs there were small vacuoles in the corneal epithelium and newly-formed fibrous tissue between it and Bowman’s membrane. The tissue was homogeneous, showing no signs of hyaline or mucoid degeneration, the epithelium over it was thinner than normal, and not keratinized. In a case of Uhthoff’s Bowman’s membrane was absent and the superficial layers of the epithelium degenerated. Whitham’s first case was a negro, aged 53, first seen in 1913, with “a small central superficial herpetic epithelial loss,” which was clear and uninfiltrated. A faint white crescent was present in the mid-periphery of the cornea, and the epithelium in this region was oedematous. There was some slight ciliary congestion and the tension was normal. The crescent later encircled the cornea, which became somewhat anaesthetic. The urine contained 0.5 per cent. of sugar. Wassermann and tubercle tests were negative. Six days on the sugar-free diet resulted in complete restoration of the corneal epithelium. He left hospital to return in six weeks with a bad relapse, having in the meantime partaken freely and indiscriminately of starch-containing foods. Eighteen days of dieting brought about complete restoration of the corneal epithelium, and during this time he had some transitory rises of intraocular tension. Subsequent observation showed some improvement, and when last seen the vision was 20/50.

In the second case, a man aged 53, there was a history of trouble with the left eye for the preceding year, the right eye being normal. The lids were swollen, conjunctiva congested, corneal epithelium oedematous with central desquamation. Diabetes had been present from six to eight years, the urine containing 3.3 per cent. of sugar. Under insulin injections, miotics and other local treatment the tension was reduced to normal, the cornea became clearer, the epithelium regenerated and the congestion diminished. The condition of the eye during the next few months showed some improvement, but details are not given as to the visual acuity.

In discussing the cases, the author points out the possible analogy between the bullous condition of the corneal epithelium and the desquamative dermatitis so constantly observed in diabetes.

F. A. Williamson-Noble.
II.—DISEASES OF CONJUNCTIVA

(1) Blatt, Nicolas (Roumania).— Curetting of the conjunctiva (abrasio conjunctivae) in chronic catarrhal conjunctivitis. 
Kürettage der Bindehaut (abrasio conjunctivae) bei den chronisch-katarrhalischen Conjunctivitiden.) 
Wien. klin. Wochenschr., No. 52, 1922.

(1) Assuming that the objective and subjective symptoms in many cases of chronic conjunctival catarrh, which resist the usual treatment, are caused by degenerative changes in the epithelium and subepithelial tissue, Blatt in these cases thoroughly scrapes the diseased parts and declares himself satisfied with the results. After anaesthesia with 5 per cent. cocain solution, injection of 1 c.c. of 1 per cent. solution of novocain (to which have been added a few drops of adrenalin) in the upper and lower angles of reflection, there follows a systematic curettage, under moderate pressure, of the conjunctiva of the tarsal region and of the angles of reflection either with a full-bellied scalpel or with a delicate sharp curette of the kind used in gynaecological work. A dressing is applied for several hours. Acute conjunctivitis forms the only contra-indication to this treatment.

V. St. John.

(2) Michail, Prof. D. (Roumania).—Haematogenous staphylococcic conjunctivitis with multiple miliary abscesses. 
(Conjonctivite staphylococcique hématogène à abcèses miliares multiples.) 

(2) Michail describes in detail a case of acute staphylococcic conjunctivitis and reviews the literature of abscess of the conjunctiva due to staphylococcus. He points out that exogenous staphylococcic conjunctivitis is sometimes the result of occlusion by bandaging of the eyes after operation. Sometimes a spontaneous blepharo-kerato-conjunctivitis of phlyctenular type arises which is of grave prognosis from its tendency to perforation of the cornea. Endogenous origin of such conjunctival affections is much more rare. Michail was able to find 19 cases in the literature, mostly under the title of “abscess of the conjunctiva,” occasionally “metastatic abscess of the sclerotic,” or “purulent scleritis.” One very characteristic point of these cases is the appearance of a single abscess, and, occasionally, from two to four. These are localized exclusively to the bulbar conjunctiva in the neighbourhood of the limbus. Generally, the superficial layers of the sclerotic are also involved. Occasionally, exophthalmos is present. In most cases a mild inflammation of the iris, ciliary body or choroid is associated. In two, perforation of the sclerotic took place, and in one, a central
DISEASES OF CONJUNCTIVA

abscess of the cornea; this latter necessitated enucleation. In most cases the prognosis is favourable. Commonly, a distant focus of sepsis is to be found in these cases. The most frequent is furunculosis, which was found in 37.5 per cent. of the cases. Occasionally, broncho-pulmonary lesions were found. A remarkable feature is the existence of good general health in association with the severe ocular lesion. Generally, the conjunctival lesions appeared within a few days of the development of the distant septic foci. The staphylococcus aureus was found in the pus from the conjunctival abscess in most cases. Blood-culture was positive only in one other case besides that of Michail. The patient, recorded in detail, was a woman of 28 years of age, who for three days before she was seen had watering of the eyes, with fever, and inflammation of the tonsils. The most important points noted in this case are as follow:

1. The appearance of numerous grey nodules on the conjunctiva of the lids and fornices, without any involvement of the bulbar conjunctiva.

2. The superficial localization of these nodules, which resembled trachoma follicles, excepting for the presence of miliary abscesses in their centre.

3. The presence of preauricular and submaxillary non-suppurative glandular enlargements.

4. The rapid and benign development of these lesions.

The staphylococcus aureus was found in the conjunctival secretion, in the material obtained by curetting the nodules in the conjunctiva and also from blood-culture. Various experimental investigations were carried out upon rabbits and guinea-pigs with positive results.

The histological appearance of the nodules showed the presence of a diffuse mononuclear infiltration with a small abscess in the middle. One of the most characteristic points in this case is the presence of a large number of miliary abscesses, placed superficially in the conjunctiva without any implication of the bulbar conjunctiva, whereas, typically, the conjunctival metastatic abscess due to staphylococcus occurs chiefly in the neighbourhood of the limbus and to the number of from one to four.

HUMPHREY NEAME.


(3) Lehrfeld, as a result of statistical investigations comes to some interesting conclusions with regard to ophthalmia neonatorum: While the average incubation period is three to
seven days, it may in exceptional cases be as long as three weeks. This may be accounted for by the use of prophylactics at birth, or it may be due to low virulence of the infecting organisms. The possibility of these late infections being due to infected hands, linen, etc., is discounted on the grounds that gonorrhoeal ophthalmia practically never occurs in the nursing mother, as it should do, were the infection carried by these means. The use of a single instillation of silver nitrate at birth is deprecated. It gives a feeling of false security and may in itself set up a conjunctivitis which may mask the symptoms of an oncoming true ophthalmia or be mistaken for a sign of infection. Also, since only a scant majority of cases occur during the first few days, the prophylaxis should be such as to combat the late cases.

The author suggests the instillation of several drops of a bland preparation of silver, such as argyrol 25 per cent. (freshly prepared) repeated on three successive days after birth, followed in each instance by thorough flushing of the eyes.

F. A. WILLIAMSON-Noble.

(4) Jacqueau (Lyon), and Lemoine (St. Quentin).—Cases of ocular diphtheria. (Diphtéries oculaires.) La Clin. Ophtal., July, 1923.

(4) Jacqueau and Lemoine report two cases of conjunctival diphtheria each of which was uniocular and in each of which there were no other local manifestations of diphtheria. The diagnosis was difficult mainly because the bacteriological examination was negative at first, though afterwards positive. As soon as the condition was recognized, which does not seem to have been possible till after the positive bacteriological report, anti-diphtheritic serum was employed by injection. In both cases the corneas were affected (neuro-paralytic) and suffered opacities, but otherwise the patients recovered.

Ernest Thomson.

(5) de Peyrelongue (Beyrouth).—An exceptionally severe case of spring catarrh. (Sur un cas de catarrhe printanier à forme exceptionnellement gráve.) La Clin. Ophtal., October, 1923.

(5) Spring catarrh sometimes develops into an extremely severe affection involving the cornea and menacing the vision. de Peyrelongue records a case of this type very fully, so fully in fact that justice can hardly be done to it in an abstract. Suffice it to say that the author has had the case under observation for about ten years. From 1913 to 1919 the corneas became more and more involved. From 1919 to 1922 the condition was about stationary,
while since 1922 an improvement has set in. The gelatinous masses covered two-thirds of the right cornea leaving only an oval area nine millimetres by six. In the left cornea the central clear area was so small that the pupil reaction could not be observed. This was in 1916. The left eye was in such a desperate condition as regards vision that operation was decided upon and the gelatinous masses were with difficulty excised. They were largely adherent to the cornea and left a rough and bleeding surface behind. There was no reaction and cicatrization occurred rapidly. The cornea remained opaque but soon began to present a reflecting surface. At the end of a period, which the reviewer is unable to determine owing to misprinting of the years, the left cornea had notably cleared in the centre and the patient could count fingers at four metres as against one metre before operation. A variety of local treatments had been applied in the course of the case, but the author himself is quite sceptical as to their value. A bibliography which includes no English names is appended to the article.

ERNEST THOMSON.


(6) Waldeck reports a case of this rare condition. It is a subacute inflammatory condition of the conjunctiva and is always associated with an inflammatory enlargement of the preauricular or other regional lymphatic glands, which may suppurate. The glandular enlargement is synchronous with the onset of the ocular symptoms, and differentiates the condition from other conjunctival inflammations. The conjunctival lesions consist of focal areas situated immediately beneath the epithelium, infiltrated with lymphocytes and plasma cells, and causing large granules or elevations, which may be polypoid. In Waldeck's case the disease began in the second eye as soon as the inflammation had subsided in the eye first attacked; it is, however, almost always unilateral. The results of animal experiments with material taken from the conjunctiva were negative; the leptothrix described by Verhoeff in the Arch. of Ophthal, 1913, as present in the nodules, was not observed.

A. F. MacCallan.


(7) Morax reports two cases of conjunctivitis due to the micrococcus catarrhalis. In both, the condition was clinically of a mild type and had a benign course; in one case, the duration
was for four days, in the other for ten days. The striking features are: (1) That the conjunctivitis is so mild; and (2) the presence of an organism which resembles the gonococcus. In the first case, an acute coryza was present; in neither was there any urethritis. Morax considers it of great importance if the organism be found to be present in the naso-pharynx. It may be so found even after its presence in the conjunctiva has ceased. Arguments are brought forward against the possibility that the organism may be the meningococcus. Full details as to the cultural methods that should be adopted are given. In the bibliography which is referred to, attention is drawn to the rarity of description of cases with a complete bacteriological report.

HUMPHREY NEAME.

(8) Wibaut and Smit.—The fight against trachoma in Amsterdam in recent years. (La lutte contre le trachome à Amsterdam dans les dernières années.) *Ann. d'Ocul.*, Vol. CLXI, p. 641, 1924.

(8) Wibaut and Smit point out that trachoma has been endemic in Amsterdam for at least half a century. A commission for investigation worked from 1914 to 1917, and found in the schools of Amsterdam, among 66,418 Christian children, 0.6 per cent. trachoma; in schools among 7,062 Jews, 8.8 per cent. trachoma. Their evidence goes to show that infection takes place in most cases before the age of six years. That is, that it is essentially a family disease and that the school plays a very minor rôle in spreading the infection.

Diagnosis. During the investigation, systematic examination of every child in the various schools of the poorer classes was carried out. Although the schools for children of somewhat better class work-people are in the same district as that in which the bulk of the cases of trachoma occur, yet these schools are quite exempt from the disease. In follicular conjunctivitis, the follicles are transparent, of uniform size and regularly arranged. The trachoma granulations, on the other hand, are larger, crowded, with the aspect of boiled sago grains, and scattered irregularly over the conjunctiva of both lids. The rule that trachoma is more marked in the upper fornix than follicular conjunctivitis is not reliable. The upper fornix is often affected by a marked degree of follicular conjunctivitis, and, on the other hand, the lower lid often has very well-marked trachoma granulations, whereas the upper lid may be but slightly affected. Diagnosis, in doubtful cases, is confirmed by the results of treatment. Those which recover rapidly are not included in the list as trachoma. Also the vast majority of the cases of trachoma yield on expression of the nodules a typical
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gelatinous material. It is usually expressed from the conjunctiva by means of the thumb-nails.

Treatment. The treatment in this fight against trachoma is carried out in the out-patient department of hospitals: (1) The most important point is the pursuit of the granulations. Expression is carried out on several occasions. In the case of isolated granulations, which are difficult to express, incision and curettage are employed. The more regularly the granulations are expressed, the more rapid is the cure. (2) Concurrently with expression, friction of the conjunctiva is applied by means of dry tampons of wool. This procedure probably removes mucus and infected epithelium. (3) The instillation of one to two per cent. silver nitrate solution, or two per cent. ichthargan. This is considered of very much less importance than the direct attack on the granulations by expression and by massage. At the beginning of the treatment, two or three attendances with treatment are required weekly. Later, one attendance per week is sufficient.

Tables show the remarkable change in the number of cases of trachoma and a great reduction in the number of new cases, year by year, since the commencement of the campaign in 1918. The campaign followed immediately upon the investigations by the commission between 1914 and 1917. Details of organization and control of the children, and of the families, are given.

HUMPHREY NEAME.


(9) Guibert adds another to the very short list of cases of subconjunctival filaria recorded in France. The case was that of a missionary from Loango, who had already had several filariae removed from other parts of the body, and who, feeling a little irritation about his left eye detected the filaria with a mirror. He consulted Guibert. Guibert saw the filaria crawling along under the upper bulbar conjunctiva from the temporal to the nasal side at the rate of half a centimetre per second. Realizing that at this rate there was every chance of his losing the worm if he waited for cocain, Guibert procured assistance for the support of the lid and seized the worm in forceps along with the conjunctiva. He then divided worm and conjunctiva with a cataract knife and picked out the two portions with fine forceps.

ERNEST THOMSON.
III.—DISEASES OF UVEA

(1) Lagrange, F. (Bordeaux).—Non-follicular tuberculous choroido-retinitis. (De la Chorio-Rétinite tuberculose afolliculaire.) Arch. d'Ophtal., July, 1924.

(1) Lagrange, in a previous communication, has described the clinical appearances of this condition (Arch. d'Ophtal., October, 1923, abstracted Brit. Jl. of Ophthal., Vol. VIII, p. 554, 1924).

In the present article he deals with the pathological conditions found in an eye which was sectioned, and also adds some clinical details and the results of treatment. The ophthalmoscopic details in the previous article are recapitulated:

1. The lesions are more often found in the macular or perimacular regions.
2. They are not isolated and distinct patches, but diffuse areas with some raising of the retina over them.
3. They are very faintly pigmented or not pigmented at all, so distinguishing them from the syphilitic condition.
4. The vitreous is affected very slightly and only at the earliest stages of the disease, and even the retina shows only an early and evanescent oedema. The condition is in other words confined almost to the choroid, vision being affected later because of destruction of the retinal pigment layer. In each of these ways, the condition is the exact reverse of what is found in the syphilitic infection. The degree of visual acuity is usually a source of astonishment to the observer, and is explained by the fact that the retina is relatively intact at the macula, and the scotomata are for the most part relative only.

Several cases and opinions are cited from the literature bearing on this particular form of tuberculous affection, notably by Guisberg, Schultz Zedden, Treacher Collins, and Francisco Fernandez, but they tend rather to show that the condition has received only scanty notice.

The eye actually examined microscopically was from a patient who had died of phthisis. The posterior segment alone was implicated (ciliary body and iris being healthy) and showed a generalized whitish non-pigmented appearance. The sections of which reproductions are given show four phases in the evolution of the disease.

Fig. 1. Increase in thickness of choroid due partly to increase in vascularity and partly to lymphocytic infiltration, the membrane of Bruch, retinal pigment layer and rest of retina seeming intact.

Fig. 2. Shows a commencing sclerosis in the vascular choroid, not extending quite up to the sclerotic. Bruch's membrane is still distinctly visible, but the retinal pigment epithelium is almost
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destroyed and there are marked changes in the rod and cone and outer molecular layers.

Fig. 3. Shows a more advanced stage with the sclerosis affecting all the retinal layers except the nerve fibre layer, and there is a commencing adhesion of the choroid to the sclera though for the most part the supra-choroidal space is still visible.

Fig. 4. Shows the complete retino-choroidal cicatrization. The section passes through a mass of fibrous tissue with here and there a few venous channels. The absence of pigment is especially noteworthy and in fact, clinically, this is the point which the author wishes chiefly to emphasize.

After giving the clinical history and appearances of several cases illustrating the condition described, the monograph ends with a note on the treatment with tuberculin (Pasteur). Importance is attached to carefully graduated doses, starting with 1/1,000 milligramme and increasing to a maximum of 1 milligramme.

The temperature and weight should be carefully watched, and to avoid relapses, a short series of injections should be renewed from time to time.

O. GAYER MORGAN.

(2) Verhoeff, F. H. (Boston).—Mycosis of the choroid following cataract extraction, and metastatic choroiditis of the other eye, producing the clinical picture of sympathetic uveitis. Arch. of Ophthal., November, 1924.

(2) Verhoeff's case occurred in a woman, aged 30 years, who was operated on for congenital cataract in the right eye. There was loss of vitreous, the wound did not heal evenly and the eye remained inflamed. Within six weeks the left eye was also involved and later a typical plastic uveitis developed in both. One year after operation both eyes were removed for relief from pain. On pathological examination, a similar condition was found in the two eyes, namely, chronic massive choroiditis and advanced irido-cyclitis. The inflammatory tissue contained numerous small abscesses, also foci of giant cells surrounded by epithelioid cells. On staining with phosphotungstic acid haematoxylin, the abscesses were found to contain bodies consisting of a central stem with bulbous swellings giving off short club-like processes. In the larger abscesses as many as forty of these bodies could be seen, in the smaller, only one or two; while in the completely necrotic abscesses, none were found. The organism resembled actinomyces in many respects, but differed in being considerably smaller and in having no typical streptothrix filaments. Careful systemic examination of the patient failed to reveal any evidence of actinomyotic infection and the organisms would, therefore, appear to have an affinity for uveal tissue. They evidently gained access to
the right eye through the operation wound, became sensitized to uveal tissue and were then carried in the blood stream to the other eye where they found conditions favourable to their growth. The important points brought out by this case report are two: First, that it affords definite proof of an organism implanted in one eye gaining access to the blood stream and apparently failing to grow anywhere in the body except in the other eye. Secondly, that it affords a possible clue to the pathogenesis of sympathetic ophthalmitis. The changes observed in the present case differed from those seen in typical sympathetic inflammation by the presence of the abscesses, and the greater intensity of the inflammation. Verhoeff has been unable to find any definite microorganisms in the lesions of sympathetic ophthalmitis, and in the present case organisms were found only in the abscesses, and never in the numerous foci of epithelioid cells. It is unlikely, if not impossible, that these foci could be produced by toxins alone, and it is reasonable to suppose that microorganisms in some form not yet recognizable were present within them, the organisms being some pleomorphic form of the fungus found in the abscesses. It, therefore, follows that similar microorganisms may be present in the lesions of sympathetic uveitis.

F. A. Williamson-Noble.


(3) The Guirals, if we read their opening statement correctly, have had the misfortune to see more than twenty cases of sympathetic ophthalmitis in eighteen months; they claim that those affected have recovered their vision, not only in the exciting eye, but also in the sympathizing eye. For the study of their cases they divide them into those arising from operative trauma, from accident with solution of continuity, and from accident without solution of continuity. Among the operation cases cataract holds the chief place, for the most part hernia of the iris was present, but in one case no entanglement of the iris appears to have been present. One case of acute glaucoma, operated on according to the method of Elliot, was followed by this grave complication on the twenty-eighth day following the operation. Only one case of trauma without solution of continuity is included in their series, a gun shot injury. The authors hold to the theory of anaphylaxis as a cause for the disease and quote Elschnig that sympathetic ophthalmitis is due to a reaction of an anaphylactic kind which affects the sympathizing eye, due to the sensitization of the organism with an antigen produced in the exciting eye.
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Experimenting on rabbits with injections of uveal pigment they claim by using pigment of the same subject to have reproduced most exactly the conditions in which sympathetic ophthalmitis appears in man. They also claim that the cure of the disease by means of injections of autoserum supports the theory of anaphylaxis. The results of their experiments on rabbits are given at some length. With regard to treatment the authors acknowledge the debt due to Professor Edmond Escomel of Arequipa (Lima), and refer to the latter's work on autoserumtherapy, published in the Revista de Medicina y Cirugía de la Habana (year not stated). Doses of two or three c.c. of autoserum are given by injection every day or every other day, and we gather that it is of no use in late cases where the iris is atrophic; in such cases excision of the blind painful eyes is indicated.

The authors end their paper with the following conclusions:

1. Sympathetic ophthalmitis is a specific anaphylactic process from organ to organ, provoked by the uveal pigment which enters the circulation, digesting the specific antibodies not only in the organ first diseased but wherever pigment exists, a condition which the eye up till then normally fulfils.

2. The injection of autoserum (integral of Escomel) desensitizes the diseased eye, permitting a cure.

3. Once cured, all the interventions necessary can be practised on each eye without fear of ophthalmitis.

4. We submit to the consideration of this sixth Latin-American Congress this work, feeling that at the present time we have no other treatment as scientific or efficacious as that which we have now finished explaining for the cure of sympathetic ophthalmitis, preserving vision in both eyes.

The above is a free translation of the concluding part of the paper; I believe that it represents the author's statements. Those who are interested can easily obtain the volume in question from the Bowman Library and read it for themselves, the Spanish is not very difficult.

R.R.J.


(4) Motoolese describes the case of a man who, on September 8, 1923, injured his right eye with a whip, and who, soon after, noticed diminution of vision in the left eye. The patient became insane, and was seen by the author in an asylum on January 20, 1924. The injured eye was shrunken and slightly tender. The
other eye had vision = 6/24. No abnormality was seen by focal illumination, nor with the ophthalmoscope. With the Gullstrand lamp nothing abnormal was seen in the anterior part of the eye, but in the vitreous, adhering to the fibrillae, and also covering the back of the lens in great numbers, were abnormal cell inclusions, appearing as brilliantly white spots of various sizes. These remained unchanged until the end of February. When the patient was seen on May 28 (about four months after the first observation) there was no trace of these white spots.

Treatment. The shrunken eye was excised on January 21. Eight intravenous injections of neosalvarsan were given, and, later, injections of strychnin. At the end of February, the vision was = 6/12 nearly.

ARTHUR GRIFFITH.

IV.—DISEASES OF LENS

(1) Zentmayer, Dr. William (Philadelphia).—The pathogenesis of Vossius' ring cataract. *Amer. Jl. of Ophthal.*, September, 1924.

(1) Zentmayer, after quoting Vossius' original theory, and the objections to it, alludes to Hesse's explanation of this condition. The latter, as a result of slit-lamp study, states that the lesion is in reality disciform in character. The opacity is composed of fine brown dots which resemble haematogenous, rather than uveal pigment. Zentmayer, during an advancement operation, accidentally perforated the sclera, causing a sector of the iris to be discoloured by a trickling of blood over its surface. On completion of the operation, examination with an electric ophthalmoscope revealed a slight haze in the pupillary area. One week later, a typical Vossius ring cataract had developed. The eye was too irritable to allow of slit-lamp examination, but the case affords strong evidence in favour of Hesse's theory.

F. A. WILLIAMSON-NOBLE.

(2) Baldwin and Bartel.—The relation to hyperglycaemia of cataract. *Jl. of Amer. Med. Assoc.*, September 27, 1924.

(2) Baldwin and Bartel have studied thirty-nine consecutive cases of cataract at the New York Infirmary for Women and Children, and eighty-eight consecutive cases of cataract at the Herman Knapp Memorial Eye Hospital, as to the presence of sugar in the blood. They find that all exhibit the phenomenon of hyperglycaemia. In the first series of cases only is there reference to
the presence of glycosuria; here eight cases had glycosuria out of a total of thirty-nine exhibiting hyperglycaemia. In the second series of cases the percentage of blood sugar varied from 0.330 to 0.084. They consider the cases studied as too few to form the basis of more than a preliminary report.

A. F. MacCallan.


(3) Anderson gives the pedigree of 79 members of the Australian branch of the family in which Nettleship* studied the incidence of lamellar cataract. In none of the Australian cases was there associated retinitis pigmentosa. He says:

"There is, I think, a definite relation between the diameter of the opacity and the time of its development. If we remember the lamellar structure of the lens and the fact that those epithelial cells which are lengthening into fibres, are the most susceptible to injury, it is easy to imagine how a period of general body malnutrition may lead to a series of defective fibres and consequent opacity. With the passage of time and the development of new transparent fibres, the cortex surrounding the opacity becomes thicker and this opaque zone gradually sinks towards the lens centre. Other epithelial structures show the effects of malnutrition, but in these, as in the nail, the defective area in time disappears. In the lens, because of the low degree of metabolic change and its lamellar structure, there is little tendency for the opacity to be absorbed and the defect is stored up. As the lens transparency depends on the evenness of and low absorptive power of the lamellar fibres, the slightest irregularity is detected as an opacity. Influences which make for lens tissue destruction, acting in the early weeks of intra-uterine life may lead to congenital aphakia or to defective capsular formation and changes in the earliest forming axial antero-posterior fibres may lead to either a congenital central cataract or a fusiform defect. Those influences acting later will produce changes in the neighbourhood of the primitive and Y-shaped suture of the embryonal lens nucleus. Vogt's researches have revealed in 25 per cent. of all eyes examined by the slit-lamp a congenital non-progressive nuclear cataract which he terms the anterior axial embryonal cataract. In notes kept of lenses examined during the last two years I find I have recorded cases which belong to this group. Lamellar cataract may be produced, and has been produced experimentally, when dystrophic influences affect the lens at a later stage of ante-natal life."

A. F. MacCallan.

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(4) Non-operative treatment of cataract has been in existence for some time. Meyer-Steineg refers especially to the work of von Senn, who points out that operation can only be performed when the cataract is advanced, and that in many cases operation is not practicable or is refused. Again, an eye operated on for cataract is left without the lens and is therefore not a normal organ. He justifies the non-operative therapy on these grounds. Although our knowledge of the aetiology is still obscure there is no reason why therapy should not be in advance of this knowledge.

The author points emphatically to the following points: (1) Cloudiness in the lens can spontaneously disappear (transitory appearance in congenital clefts); (2) the cornea and the vitreous are therapeutically influenced; (3) here the effect is indirect as one cannot apply the agent directly; (4) iodine compositions are specially retrogressive in their action; (5) there are different types of cataract which must be differentiated both from a morphological and from a genetic basis.

He considers that the subcapsular type is the most typical form. In this he agrees with Hess in opposition to Vogt. This type is connected with epithelial damage and is on account of this accessible to medication. In 501 patients the author treated 876 eyes with at least 5/30 visual acuity. The results were as follow: 117 (15 per cent.) got worse; 246 (28 per cent.) remained stationary; 513 (58 per cent.), improved. The degree of improvement in the most unfavourable cases was from 5/30 to 5/20, and in the most favourable from 5/20 to 5/5. Objectively there was a retrogressive change from the fully developed cloudiness, and this could be demonstrated with the ophthalmoscope. Pictures of this were made. Sometimes the results are transitory.

General therapy consisted in the giving of iodine in small doses. Locally, the instillation of potassium iodide, sodium iodide, and dionin. The most important part of the procedure is the subconjunctival injection of phakolysin as supplied by L. W. Gans, in Oberursel (soluble animal lens albumen, iodide of potassium and sodium and sodium chloride). The author is of opinion that by this means the normal inner interchanges in the lens are restored, and the retro-formation of the forming cystin into cystein takes place. The subcapsular forms reacted most favourably, the supranuclear less so. The nuclear types remained stationary.

S. Spence Meighan.
DISEASES OF LENS


(5) Out of a series of 130,000 eye cases, in which were 2,236 lenticular opacities, Heine has gathered five cases of lamellar cataract associated with tetany and ten complicating myotonia.

The five cases associated with tetany were all middle aged adults; four were females, one was a male. Two of them were of the strumipriva type, the first of which is interesting in that the lenticular degeneration did not appear until a very long interval—twenty years—after thyroidectomy. In the second case, operation was followed in a few months by cataract and tetany.

Of the cases occurring in association with myotonia, three were females and seven were males, the series including a mother and son of the same family. The author gives a full clinical history of these cases, but the interest of the article lies in the account of the microscopic structure of the lens as revealed by the slit-lamp. He quotes Künsel (Arch. f. Ophthal., Vol. CXIV, 1924) as having reported four such cases, all females, after thyroidectomy, whose lenticular structure all showed substantial similarity. They differ, however, from those under review, and, moreover, Heine's cases differ among themselves. Those of the tetany class show two different types—a subcapsular zone, anteriorly and posteriorly, of fine opacity, internal to which is a series of concentric rings one to three in number; or a clear cortical layer with a central mass of nuclear granular opacity. Those in the myotonia class also differed, even in the familial case already mentioned. Whereas the mother had a subcapsular zone of granular opacity (resembling the appearance of Künsel's four cases), the son had a simple posterior cortical cataract.

The author, therefore, concludes that until more clinical material has been gathered, no definite opinion can be given as to the peculiar structure—if any—which these opacities assume.

W. S. DUKE-ELDER.


(6) Major and Curran describe the case of a child of eleven months old placed under treatment on account of glycosuria, in whom both lenses had become opaque since birth. The patient was placed on a diet of whole cow's milk, 5 per cent. vegetable purées and cod-liver oil, and was given from six to ten units of insulin a day. Discussion operations were performed in each eye with apparently good visual results, and with disappearance of the pre-existing nystagmus.

A. F. MACCALLAN.

Elschnig at the Heidelberg Congress held at Jena, had come to the conclusion that the intracapsular extraction was the operation of choice. In this he agreed with the opinion of Smith and Stanculeanu. He, however, believed that it could only be performed in combination with an iridectomy. Since then Elschnig has performed the "Stanculeanu-Torocksche" intracapsular extraction. In this operation traction is made on the lens capsule by means of forceps, and simultaneously pressure is applied to the cornea. He has performed forty-five without and forty-four with an iridectomy. In the former group he had 8 per cent. iris prolapse in spite of peripheral incision in the iris and 6 per cent. vitreous prolapse. Recently he has performed the Barraquer extraction in forty-four cases and forty of these without iridectomy. In no case had he iris prolapse, but vitreous prolapse in 6 per cent. His first operations, which were not technically perfect, are included in this. He considers that this last method is the best and least dangerous of all intracapsular extractions. Without doubt it is far superior for immature cataracts to the extracapsular extraction. This superiority is due to anatomical reasons and the examination of many eyes pathologically has proved this. Among those examined were four on which intracapsular extraction had been performed.

S. SPENCE MEIGHAN.

Rochon-Duvigneaud.—Large capsulectomy in the operation of extraction of cataract. (La kystectomie large dans l'opération de la cataracte.) Ann. d'Ocul., Vol. CLXI, p. 484, July, 1924.

Rochon-Duvigneaud points out that examination with the microscope of sections of eyes that have had capsulotomy performed on them, post-mortem, shows a definite ectropion of the anterior capsule. After operation on the living, this ectropion of the capsule becomes, by cicatrization, abolished and the wound of the capsule is drawn together or closed. After this narrowing or closure of the capsule wound, proliferation of the epithelium and folding of the capsule take place, resulting in considerable interference with vision. Briefly, capsulotomy preserves the capsular sac intact with all its inconveniences. The operation of capsulectomy, on the other hand, especially if it be carried out with Kalt's forceps, by taking a very wide grip of the anterior surface of the lens, has the effect, as it were, of opening the box wide by removing the lid. A very large part of the anterior capsule
Diseases of Lens

is removed, so that there is no possibility of closure of the capsule wound and the lens substance in the periphery is exposed after delivery of the cataract to the action of the aqueous humour.

Out of the fifty-four capsulectomies in the operation of cataract extraction, forty-two showed capsules varying in size from 5 x 2 mm. to 7 x 6 mm., an aperture of considerable size in the anterior surface of the lens. Very occasionally, extraction of the lens in its capsule takes place by this procedure. Rochon-Duvigneaud had ten such cases of which one was complete extraction without rupture of the capsule. In none of these was there any loss of vitreous.

Special benefit results from this procedure in cases of soft cataract, that is, the cases which are particularly prone to the development of early secondary cataract. This, as stated, is owing to the exposure of the soft peripheral lens matter to the aqueous. Visual results in these cases vary from 0.7 to 0.8 or even more in a large number of cases.

Humphrey Neame.


(9) One finds occasionally after an extraction operation, infiltrations of the cornea at the limbus which are superficial and punctiform in character. They are characterized by their rapid course and the absence of any symptoms referable to the cornea or the conjunctiva. In addition they are completely painless. Insensitiveness of the bulbar conjunctiva is an accompaniment. They appear on an average three to four days after the operation. Ulceration takes place, as a rule, the following day, and progression towards healing in a further three days, with the process complete in a further two days. The normal corneal lustre is completely restored. In 4,651 extraction operations, there were 39 cases. There does not seem to exist any general predisposition to these infiltrations. It is noteworthy that one of the affected cases was under sixty years. The bacteriological examination of scrapings has always been negative. It is not probable that any of the manifold antiseptics in use, nor the various methods of operating is a factor. Elschnig refers to them in his book and they are also described by Bachstetz. The latter author ascribes these conditions to disturbances of nutrition, but Stanka points to two instances which would indicate that this is not so: (1) The position of these infiltrations is always in that part of the limbus which has not been interfered with surgically; (2) they are always marginal, and
at this position the nourishment of the cornea is better than centrally. He is, therefore, of opinion that external injury is a cause as is also the secondary hyperaemia of the marginal plexus after the adrenalin effect has passed off. On account of this latter occurrence there is an oedema of the conjunctiva at the corneoscleral junction. The formation of a groove thus takes place between this chemotic conjunctiva and the cornea. In this groove, lacrymal fluid and leucocytes collect. Maceration of the epithelium thus takes place and this gives rise to the condition described. Factors favouring its production are, cocain, the trauma to the cornea in the massage of the cornea in the delivery of the lens, and the lids not being closed after operation. As the course of the condition is a benign one and the healing of the wound is not interfered with, no therapy is necessary.

S. Spence Meighan.

BOOK NOTICE


This is the first number of a resuscitated Spanish Journal of Ophthalmology. In 1894, the "Anales de Oftalmologia" was founded by Dr. R. del Castillo Quarticellers, but it was unfortunate, and after a run of two years it was dropped. Now it has reappeared under the editorship of Dr. R. del Castillo Ruiz of Madrid, assisted by a number of collaborators in Europe and South America.

The plan of the journal follows classical lines. Two original articles appear; the first, by Barraquer, is an enthusiastic plea for the operation of total cataract extraction as elaborated and practised by himself in his clinic at Barcelona. In the second, Poyales of Madrid, details his technique of dacryo-cysto-rhinostomy after dacryocystotomy, whereby he leaves an epithelialized tract between the conjunctival sac and the nose.

These papers are succeeded by clinical notes of interesting cases of a lymphosarcoma of the upper lid and of Parinaud’s conjunctivitis respectively. Reports of scientific societies follow. The fourth section comprises a résumé of current literature. It is intended that these abstracts be made a special feature of the periodical, and the ophthalmic literature of the world has been divided up and apportioned to different sub-editors; for the British and American reports Dr. Poyales will be responsible. In this first issue recent French and German writings are abstracted.