CONJUNCTIVA

ABSTRACTS

I.—CONJUNCTIVA


Lehrfeld’s comprehensive article is based on observations he has made at the Wills Hospital on 87 cases of spring catarrh seen during the years 1929, 1930, and 1931. One of his outstanding conclusions is that many cases are unrecognized, the palpebral variety being regarded as follicular conjunctivitis and the limbal form as phlyctenular disease. The two are separate entities though due to the same cause, which is probably allergic sensitiveness to street dusts, animal dusts or pollens. Males are affected more frequently than females, the proportion in the present series being 62 to 25. Forty-six cases were of the palpebral and 41 of the limbal type. In conjunctival smears from 69 cases, 40 showed eosinophils and in blood counts on 72 cases, 31 revealed an eosinophilia of over 4 per cent. The oldest patient was aged 59 years and the youngest two years. The limbal form has the following characteristics: it is commoner in children, leaves no permanent changes, or ulcers, and involves both eyes. Single discrete, or crops of vesicles may appear round the cornea, most commonly at the upper margin and they may become confluent. Irritation is usually only slight. The palpebral forms manifest three varieties: (1) Simple follicular, characterized by itching and redness with only slight pathological changes, the so-called milky film not appearing until after two or more occasional attacks. (2) The cobblestone type, seen after the disease has lasted two or three seasons and characterized by the formation of large granulations. When well established, a characteristic discharge of thick ropy lardaceous material may be peeled off from the conjunctival surface of the upper lid, without any bleeding. This discharge is likened by the author to chewing gum. (3) The giant form, where large granulomata with deep fissures between them occupy the entire conjunctival surface of the upper lids. It is remarkable that the palpebral form of the disease does not occur in negroes.

In an endeavour to find the cause of vernal conjunctivitis, the author used a series of skin tests with various pollens, proteins and dusts. The scratch method is practically useless, only three out of 23 patients giving positive reactions, whereas the intradermal injection in nine cases gave positive results in all with one or other of the test substances used. An interesting proof of the allergic nature of spring catarrh was afforded by introducing into
the conjunctival sacs of two patients substances to which they were sensitive. Although this was done in February, quite an intense reaction was produced, with irritation and lacrimation.

The author's opinion of radium is that "it is not a cure-all for vernal conjunctivitis, but that it is valuable in alleviating the itching in all forms and in reducing the pathological changes in the advanced chronic cases of the cobblestone type."

With regard to treatment, the best results are obtained by repeated cleansing of the conjunctival sacs with cold boric lotion. This should be done at least seven times a day. When there are large granulations the following drops should be instilled three times daily for the first week:

- Phenocaine gr. ¼
- Epinephrine (1:1000) m. xx
- Aq. Dest. ad ¾j

F. A. W -N.


(2) Pascheff has already published reports of his investigations, extending over many years, in diseases of the conjunctiva, and in a paper in 1930, suggested a classification of the hyperplasias of this structure. The present communication which is in some respects supplementary to his former writings, deals with the lympho-cellular or lymphomatous varieties. These he divides into four groups with the following titles:

1. Diffuse leukaemic hyperplastic conjunctivitis.
2. Diffuse hyperplastic conjunctivitis of orbital origin.
3. Diffuse hyperplastic conjunctivitis, metastatic and symmetrical, secondary to lymphomata of the skin.
4. Diffuse simple hyperplastic conjunctivitis.

In each group examples with full clinical and pathological reports are given.

The length of this paper and the exceptional amount of detail are such that brief excerpts therefrom would convey little to the reader and be unfair to the writer. The paper is illustrated by numerous photographs of the clinical and anatomical appearances, and is followed by a bibliography of more than usual merit, by reason of the scattered distribution of the literature of this subject.

J. B. Lawford.

(3) Jordan records two cases illustrative of tuberculosis of the conjunctiva. In the first a yellowish nodule, the size of a pea, was removed from near the limbus in a girl, aged 15 years. The tuberculous nature of the lesion was only recognized histologically. Subsequent radiological examination revealed an apparently simultaneously developed pulmonary lesion; the conjunctival lesion is held to have been of endogenous origin. In the second case, recurrent acutely inflamed conjunctival tissue at the lower fornix was excised, as there was no response to local treatment. Histologically no tuberculous evidence was found and animal inoculation was negative. But as further recurrences took place and in view of evidence of healed tuberculosis, as shown by scarring in the neck and by X-ray findings in the lungs, the patient was treated with tuberculin. The result was striking on this and subsequent occasions when further recurrences took place.

ARNOLD SORSBY.

(4) Longchampt, J. and Reboul, J. (Toulon).—Four cases of Parinaud’s conjunctivitis. (Quatre cas de Conjunctivite de Parinaud). Arch. d’Ophthal., February, 1932.

(4) Longchampt and Reboul record an unusual experience: four examples of Parinaud’s conjunctivitis came under their observation within a month. The cases all occurred in persons who were in immediate and daily contact with animals. Two of the patients belonged to a family whose occupation was the care of sick poultry; one was a farmer, one a midwife who had been a visitor on a farm for several weeks.

In the two relatives, mother and daughter, while the ocular manifestations were slight, the constitutional symptoms were severe and prolonged.

J. B. LAWFORD.


(5) An enquiry into the connection between the presence or absence of Provaczek-Halberstädt bodies and the clinical picture of trachoma and other forms of conjunctivitis led Taborisky to the conclusion that the presence of these bodies practically always indicates trachoma, or as he shortly puts it “without inclusions, no trachoma.”
Cases of conjunctivitis with inclusion bodies (apart from inclusion blennorrhoea) are extremely rare, and in their initial stage always closely resemble acute trachoma, if they are not identical with it; this shows the Provaczek-Halberstäd body are not an accidental phenomenon, but are the cause of their clinical symptoms. These bodies in such cases are of a non-virulent type and probably of genital origin.

The specific significance of the Provaczek-Halberstäd body in trachoma is demonstrated by the striking parallelism between their appearance, development, disappearance, and the clinical features and course of trachoma.

These bodies behave differently in different parts of the conjunctiva according to the resistance of the epithelial covering to their development: the greatest resistance is offered by the corneal epithelium, followed by that at the limbus, the conjunctiva sclerae and the least in the palpebral portion.

The diagnostic value of the Provaczek-Halberstäd body is specially important in the differential diagnosis between trachoma and similar varieties of conjunctivitis.

Inclusion blennorrhoea is a form of conjunctivitis resembling trachoma, due to a genital variety of the Provaczek-Halberstäd body. Chronic blennorrhoea is most probably a mixed infection of gonococci and other micro-organisms with Provaczek-Halberstäd bodies, and in this condition the papillary hypertrophy with its recesses forms a favourable nidus for their growth.

Thos. Snowball.

II.—TRACHOMA

(1) Schousboe (Algeria).—The clinical diagnosis of the initial stage of trachoma, with graphs. (Etude des aspects cliniques du debut du trachome a l'aide de graphiques).


(1) Since microscopical, bacteriological, and serological investigations have proved to be without value in the diagnosis of trachoma, up to the present time, we must rely on clinical observation. Schousboe gives a good drawing of early trachomatous pannus associated with corneal trachoma follicles in esse and after cicatrisation as portrayed by Herbert in the Transactions of the Ophthalmological Society of the United Kingdom, Vol. XXIV, p. 67, 1904. These are now known as the rosettes and peripheral pits of Herbert. The broadcast warnings in European and Eastern medical journals which have appeared during the last few years
should have prevented the author from attributing this important clinical observation to a recent writer.

A. F. MacCallan.

(2) Wilson, Rowland (Cairo).—The corneal vessels in Egyptian trachoma. Sixth Annual Report of The Giza Memorial Ophthalmic Laboratory. 1931.

(2) Trachoma in Egypt usually commences in the first year of life and Wilson has never seen a year-old child with trachoma who did not show evidence of new vessel formation in the cornea. Further he has had opportunity of examining many infants who have had definite evidences of trachoma for only a month or two, and all have shown definite new vessel formation in the cornea. An examination with the slit-lamp has shown that vascular changes in the cornea may be expected almost immediately after the appearance of definite lesions in the tarsal conjunctiva. This bears out the previously expressed opinion of the reviewer that great hesitation in diagnosing trachoma should be observed in any case in which there are no free vessels running into the clear corneal tissue from the normal or elongated vascular loops.

A. F. MacCallan.

(3) Busacca (Brazil).—The frequency of corneal complications in trachoma deduced from the examination of a hundred cases. (La frequenza delle complicazione corneali nel tracoma dedotta dallo esame di cento casi). Rev. Internat. du Trach., Avril, 1933.

(3) Busacca has written an interesting clinical study of a hundred cases of trachoma which should be read in the original by those who live in countries where this disease is rife. His most important point is that trachomatous pannus constantly can be detected by the use of the slit-lamp in the earliest cases. In his opinion the corneal rosettes and peripheral pits of Herbert are found only in the lunular part of the conjunctiva which covers the cornea and not in the real corneal tissue. The depressed scars which are to be found in many cases anywhere on the cornea, which are the result of infiltrations, have a different origin from the peripheral pits; an opinion which would not be universally accepted.

A. F. MacCallan.


(4) Among 1,600 trachoma cases treated by Cattaneo he has found 16 in which only one eye appeared to be affected. However, on examination with the slit-lamp all were found to have both
eyes affected. For many years the reviewer has urged the importance of such an examination. This does not mean that unilateral trachoma is a non-existent phenomenon but that adequate examination reduces the number of these cases.

A. F. MacCallan.


(5) Wilson points out the scant attention that has been paid to the formation of vascular loops and capillary end loops at the limbus in the normal eye and particularly so in the study of trachoma with vascularization of the cornea and pannus.

He describes three vascular zones at the limbus: the palisade zone, zone of vascular loops, and the zone of end-capillary loops; also a primary groove in the palisade zone and at the junction of sclera and cornea and a secondary groove at the junction of the vascular loops and end-capillary loops. In trachoma the vascular changes take place in the vicinity of the secondary groove, the end-capillary loops expanding and extending into the cornea instead of occupying a narrow fringe and being disposed in a close network as under normal conditions.

Diagrams and coloured slit-lamp drawings illustrate these changes. Wilson comments on the early stage at which corneal vascular changes are evident. Many cases of trachoma in Egypt occur during the first year of life and typical vascular changes have been seen in the cornea one month after infection. Points in differential diagnosis are discussed.

H. B. Stallard.


(6) von Taborisky states that bacteriological, cytological, and histological examinations are important in the differential diagnosis of trachoma. The micro-organisms found in the conjunctival sac in cases of trachoma do not differ from those present under normal conditions.

Scrapings of the conjunctiva show alterations in the epithelial cells; the cylindrical cells of the palpebral conjunctiva are transformed into squamous cells and the nuclear membrane of these cells shows a jagged outline and later the nucleus undergoes complete degeneration. Inclusion bodies in the conjunctival epithelium can be found early in the disease, but after it has been established for one year, these are often untraceable.
Thus in the early stages of trachoma the examination of epithelial scrapings is of value, for in no other inflammatory disease or degeneration of the conjunctiva are inclusion bodies to be found. Transformation, proliferation and degeneration of the epithelium are characteristic of trachoma. The structure of the follicles differs in site and histological appearance from that of chronic follicular conjunctivitis.

H. B. Stallard.


(7) "In all forms of inflammatory conditions of the conjunctiva of some standing, the epithelium is thrown into papillae, the size of these differ in every individual case. Even in the initial stages of trachoma (MacCallan, Tr. I.) these papillae are evident microscopically, although they are not seen clinically (naked eye appearance). As a result of this papillary hypertrophy the spaces between the papillae are lined with epithelium, and look in section like glandular tubules. By further evolution of the trachomatous process the subepithelial layer increases in thickness and the pseudo-glandular tubules send in further deeper epithelial plugs, similar to glandular cancer. The epithelium of the blind end of these plugs cannot be shed off on the surface, and will accumulate inside the tubule as epithelial débris mixed with leucocytes, which cannot be discharged through the small openings or mouths of the pseudo-glandular tubules or epithelial down-growths; as a result of this the tubules are transformed into cysts filled with inspissated material that may undergo calcareous degeneration. This is the true nature of the so-called post-trachomatous degenerations as described in all the books of pathology of the eye, and called by some concretions or concréments. Dr. MacCallan in his early days in the Egyptian Ophthalmic Hospitals, as a good clinical observer and in the absence of histological preparations, described them as degenerations of the trachomatous follicles. In fact they are so intimately connected with trachoma and I advise him to give them the name of 'Post-trachomatous concretions' (P.T.C.), so as not to bring much change in the first name put down by one of the masters of ophthalmology in Egypt, and in commemoration of his stay among us."

During the discussion on the paper Wilson expressed his agreement with Sobhy and stated that he had previously published histological evidence on this subject.

The reviewer accepts with pleasure the pathological correction and the kind compliment, but he sees no reason why what Sobhy
himself calls a calcareous degeneration should be renamed a concretion. The term "Post-trachomatous degeneration" or "P.T.D." has become known to hundreds of ophthalmologists and should not be disturbed.

A. F. MacCallan.

III.—LEN S


(1) Gourfein. after a review of various theories as to the aetiology of senile cataract, discusses the influence of calcium deficiency. Through his chef de laboratoire, Piotrowski, he made experiments to compare the total blood calcium in cataractous and non-cataractous individuals and gives detailed tables showing the results. Since "lesions of the crystalline lens" in tetany have been attributed to deficiency of blood calcium he takes notice of this also. Gourfein's conclusions are: (1) There is no difference between the total calcium content of the serum in 21 cases of cataract and 26 non-cataractous cases. (2) In no case (except one non-cataractous) are there spontaneous signs of tetany (as investigated by the signs of Chwostek, of Trousseau, of Lust, and of Weil). (3) There is no relation between the proportion (taux) of calcium and stage (degré) of the cataract.

Ernest Thomson.


(2) The short article by Riddell is excellent, within the scope of the author's intentions. It presents to the general practitioner the various complaints made by patients with various types of cataract and relates these complaints in a general way to the kind of cataract. It cautions the practitioner on the various ways in which cataract may be secondary to other diseases, or may exist in association with them, so altering the prognosis. The very difficult question of what and how much to say to the patient is fairly fully discussed and particular attention is paid to the necessity for caution in using the words "cataract" and "operation," and it is pointed out that, in the minds of some patients, cataract and cancer are synonymous terms. As doubtless, the author would be the first to admit, a full synopsis of his very helpful article would be out of place in a specialist journal.

Ernest Thomson.
(3) **Whiting, Maurice M. (London).—Modern development in cataract extraction.** The Montgomery Memorial Lecture, delivered at the Royal College of Surgeons in Ireland, February 17, 1933.

(3) **Whiting,** in the Montgomery Memorial Lecture, described the methods of intra-capsular cataract extraction as practised by Smith, Barraquer, and those who use the capsule forceps for delivering the lens in its capsule. It is evident that Whiting favours the extra-capsular method of extraction with iridectomy and subsequent capsulotomy when indicated. The necessity of a bacteriological culture before operation is stressed, also the need for careful medical treatment of cases of diabetic cataract. He described the technique which he believes to be safe for the patient and discusses the advantages and disadvantages of certain technical modifications such as seventh nerve block, retro-ocular anaesthesia, a suture passed through the superior rectus, capsulotomy simultaneously with the corneal section, cystitome or capsule forceps, and other matters. The lecture contains much sound practical advice about cataract extraction from a surgeon of wide experience and conservative views.

H. B. STALLARD.

(4) **Saradindu Sanyal (Calcutta).—A preliminary note on the clinical use of insulin in the anterior chamber haemorrhage after cataract extraction.** *Calcutta Medical Journal,* March, 1933.

(4) **Saradindu Sanyal** reviews the causes and varieties of intraocular haemorrhage during and after cataract operations. For the small amount of blood that enters the eye from the corneal section and margins of the iridectomy he recommends the internal administration of calcium glycerophosphate 15 grs: with parathyroid 1/10 gr. twice a day. For expulsive haemorrhage occurring immediately after the corneal section is made, the author advises that the operation be abandoned, the eye firmly bandaged, ice applied to the neck and atropine and morphine injected subcutaneously. In arterio-sclerosis it may be necessary to perform venesection. Takahasi has suggested that in diabetes, insulin by lowering the blood sugar, increases the fibrin ferment present in the aqueous. Saradindu Sanyal has attempted to put this to practical use in cases of haemorrhage into the anterior chamber. Insulin is given in small doses, commencing with two units and gradually increasing the dose. The injection is made before a meal. A rich carbohydrate diet is given and the blood sugar estimated at three hourly intervals after the meal. Precautions are taken against hypoglycaemia and special care is necessary in cases of elderly persons, arterio-sclerosis, cardiac disease, and
gastro-intestinal disorders. The author claims that the administration of insulin accelerates the absorption of blood clot in the anterior chamber. A complication occurred in one elderly patient submitted to this treatment. After five injections of two units of insulin the vision in his better eye was reduced from 6/6 to 6/24, but subsequently recovered seven days after the insulin injections were omitted. The urine was sugar free. The author believes that this was due to changes in the water balance of the body induced by insulin. The author states that the number of cases recorded is at present too small for any definite conclusions to be made, but, nevertheless, it is a fact that insulin accelerates the absorption of blood in the anterior chamber.

H. B. STALLARD.

(5) Green, John and Beisbarth, Carl (St. Louis).—Extraction of congenital and young adult cataract by the method of Barkan. Amer. Jl. of Ophthal., July, 1933.

(5) Green and Beisbarth review briefly the disadvantages and complications arising from the needling operation for congenital and juvenile cataracts and of cataract in early adult life, whether traumatic or not. They describe the technique elaborated by Otto Barkan for "the extraction of congenital soft and membranous cataracts." Full dilatation of the pupil is essential and this is obtained by the subconjunctival injection of adrenalin 1/1,000. By this means the pupil remains fully dilated when the anterior chamber is lost. An incision is made in the cornea with a keratome 2 mm. from the limbus, the keratome being entered very obliquely so as to produce a valve-like opening which is quickly sealed. Through this opening a cystitome, capsule forceps, hook, spoon, irrigator, and even scissors may be passed as required. The authors state that the amount of manipulation possible is surprising and there is no tendency of the well-retracted iris to prolapse. Six case reports are given.

H. B. STALLARD.

IV.—MISCELLANEOUS


(1) Conway's case is that of a miner who was admitted to hospital with double endophthalmitis. Fourteen days previously he had developed left lobar pneumonia and twenty-one days
previously his left little finger had been severely crushed. On admission the left eye was in a more advanced state of purulent disorganization than the right. Orbital cellulitis was present, yet investigations failed to show any cause other than the pneumonia. Pus withdrawn from one of the eyes showed numerous polymorphonuclear pus cells and Gram-positive diplococci, a few of which were intra-cellular. Both corneae perforated and the eyes shrivelled. Eight weeks after admission the patient was allowed to go home, there being no contraindications. "Two days later he complained of a sudden pain over the heart, and died shortly afterwards."

The author does not mention an autopsy and the presumption is that none was held, but he adds the following significant sentence: "It would seem that the endocardium may become involved at a comparatively late date, and the lesson I have learned is that these cases require a long convalescence in bed as a precautionary measure. The case described showed no signs of acute pyaemia or septicaemia: nevertheless, a fatal complication developed."

Ernest Thomson.

(2) Giannantoni (Perugia).—The nature of amblyopia from lead-poisoning. (Ricerche sperimentali sull’ambliopia tossica saturnina). Boll. d’Ocul., February, 1933.

Lead is one of the commoner causes of toxic amblyopia. Its effect is much more serious than that due to tobacco, and the pathology is not well understood. With the view of throwing light on the mechanism Giannantoni has made a series of experiments on rabbits; these were given doses of lead, in some cases by the mouth, in others by subcutaneous injections. The animals sometimes survived for many months.

As a result of the examination of the retinæ and optic nerves the author concludes that both the retina and the nerve are affected by the poison. The retina shows marked degeneration of the ganglion cells; the nerve shows first breaking up of the myelin sheath and then degeneration of the axis cylinder; the changes in the glia and in the vessels are often wanting and when present only slight.

Harold Grimsdale.


After an anatomical consideration of the connections of the cavernous sinus Benjamin gives a short résumé of the symptomatology and causation of its thrombosis. The prognosis
being uniformly bad, heroic surgical measures are sometimes resorted to. Brunner reported cure of a unilateral case after ligature of the internal carotid, Bircher after opening the sinus through the orbit, while fairly recently Christopher has had a successful case in which he drained the sinus by means of Krönlein's operation. Benjamin's case was a boy, aged 15 years, suffering from a right-sided purulent otitis media. A right-sided mastoid operation was performed. The patient developed many secondary abscesses. Twelve days after operation inequality of the pupils was noticed—four days later there was proptosis. Abscesses formed in both orbits, which were opened. The process subsided, but further secondary abscesses occurred: parotid, pharyngeal, etc. The patient finally recovered with a unilateral optic atrophy.

Ida Mann.

BOOK NOTICES


There are now seven special ophthalmic clinics maintained by the Department in Beersheba, Jaffa, Gaza, Ramleh, Nablus, Tulkarem and Acre. The most serious ophthalmic question which has to be dealt with in Palestine is the summer epidemic of acute conjunctivitis which is rife in the southern districts. According to the 1931 Census 39 per cent. of the population in this part of the country were blind in one or both eyes. This almost incredible ocular devastation has been corroborated by Dr. Strathern who spent a month in the villages most affected. It is proposed to re-establish a mobile travelling ophthalmic unit to visit the scenes of the more severe epidemics.

However the main causes of the occurrence of these epidemics and of their severity are a greatly diminished average rainfall for several years and an increasing population. With a grossly insufficient water supply, providing not even a minimum for domestic purposes, ocular conditions, in the opinion of the reviewer, are likely to get worse even though increased opportunity of attending an ophthalmic clinic is provided. While the drastic methods of Herod are unlikely to appeal to the very able Director of the Department of Health, Colonel Heron, some diminution in the increase of the population could be affected by stopping all immigration into Palestine until the rainfall again became normal, for in the six months, January to June, 1932, 4340 persons came to reside in the country.