I.—THERAPEUTICS


(1) John has investigated the records of a large clinic in Vienna to determine whether tabetic optic atrophy is becoming less frequent and whether the cases seen at the present day are milder in nature and more responsive to modern anti-syphilitic therapy. Evidence for these possibilities has been advanced on good authority.

The author has investigated the records for four non-consecutive years, each year representing a different phase in the changing methods of treatment in syphilis, the years chosen being 1905, 1910, 1920 and 1925. In all 83 patients (including 14 women) were treated during these years, the numbers per year being fairly evenly distributed. In 1905, potassium iodide was the only treatment given; the same treatment was also given to the patients in 1910, except in one case where mercury was used. In 1920, three patients had endo-lumbar salvarsan treatment; three were given malaria, and three more only potassium iodide. More varied combinations were employed in 1925; two patients had malaria together with salvarsan treatment; another had this treatment together with eight suboccipital injections of air; endo-lumbar and intra-venous injections were given in one case; in another, injections of salvarsan and phlogetanin; mercury and salvarsan was employed in one patient and Mirian strychnine in another.

The author concludes that on the whole there is no evidence that tabetic atrophy has assumed a milder form in recent years, but it is noteworthy that amongst the cases seen in 1920 and in 1925 there is not a single one that had been treated in the first instance for syphilis by the modern therapy of salvarsan and mercury. This is rather puzzling in view of the fact that the number of cases of optic atrophy does not seem to have declined, as it should have done if salvarsan treatment, which is now universal, prevents the onset of optic atrophy. As far as therapy in established atrophy is concerned, the author finds that the cases treated with potassium iodide only, did best. There is certainly no evidence of the more recent methods having exercised a favourable influence on the course of the affection.

Arnold Sorsby.

(2) Jaensch reports on the results obtained in 18 cases of tabetic optic atrophy treated by the Swift-Ellis method, and in 7 cases treated by malaria in combination with salvarsan or bismuth.

Treatment by the Swift-Ellis method consists in withdrawing a small quantity of blood from the patient, one hour after the injection of salvarsan. This blood is then centrifugalized, diluted with physiological saline solution, and, after withdrawing 10 c.c. cerebrospinal fluid, injected into the spinal theca (on the day following the salvarsan injection). The 18 cases thus treated are classified in three groups, according to the results obtained. In the first group of seven all the patients became blind, the blindness developing in periods ranging between two and twenty-seven months. In the second group also of seven cases, the progress was not so disastrous; four cases showed stationary central vision, though the field was shrinking; in the remaining three both fields and central visual acuity were failing. As these cases were under observation for a period ranging from four months to no more than two years, one must avoid dogmatic conclusions. The third group consists of four cases, in two of which visual acuity became better under treatment, in one both visual acuity and field improved somewhat, and one case relapsed after improvement. The author holds that as the majority of cases were saved from total blindness, there is some value in this method of treatment, and that there is a good deal to be said for a measure which aims at breaking through the "haemato-encephalic barrier" which bars the action of salvarsan injected intravenously.

Of seven cases treated by malaria the results were so unsatisfactory that in the author's opinion, it is doubtful whether it is justifiable to try it on other patients.

Looking back on older cases Jaensch believes that the least unsatisfactory results are probably obtained in cases where there had been little or no treatment at all. Treatment with potassium iodide and bismuth rather than the more elaborate recent methods—methods that are by no means free from danger—seems to be the better procedure. Apparently it is possible to influence the Wassermann reaction of blood and cerebro-spinal fluid without in the least influencing the course of the nerve atrophy. "The observations on our patients show up with merciless clearness the impotence of our therapeutic measures."

Arnold Sorsby.

(3) Terson prefers this designation for all the cases of entropion which do not fall under the heading of cicatricial. The patient shows usually the signs and appearances of age, but the lid margin is usually healthy, firm and elastic. It almost always affects the lower lid alone. Reference is made to various palliative methods of treatment, as by a rubber attachment to the spectacle frame, by adhesive strapping, collodion, and by a special adhesive elastic band; also to operative methods including that of shortening the lower lid as for ectropion. With this latter, Terson disagrees, as he has usually found the lid margin in good condition and not elongated and relaxed as is the case in senile ectropion. He recommends the method of Weekers, of Liège (*Arch. d'Ophtal.* January, 1928,) of injection of 80% alcohol subcutaneously into the lower lid. After anaesthetization with 2% novocaine, 1 c.c. or slightly less of 80% alcohol is injected subcutaneously along the lower lid, but with care to avoid the skin itself from beneath, and also without injecting the nasal quarter of the eyelid, so as to avoid interference with the lacrimal canaliculus. In order to obtain a more marked effect, 2 parts of iodine per 1,000 may be added to the 80% alcohol. A smaller dose than 1 c.c. is advisable in young patients.

HUMPHREY NEAME.


(4) Safar reports the successful use of alcohol injections in two cases of severe blepharospasm and in two cases of spasmodic entropion. This method of treatment has been strongly recommended by Belgian writers and Safar supports their claims.

Injections of alcohol being painful, a preliminary injection of novocaine should be made a few minutes before injecting the alcohol. For spasmodic entropion 1'-5—2'-0 c.c. of 4 per cent. novocaine and 1'-0—1'-5 c.c. of 80 per cent. alcohol should be used. The injection should be made not subcutaneously but into the substance of the orbicularis muscle, ensuring this by having the needle near the periosteam. For blepharospasm, both the upper and lower portions of the orbicularis have to be injected, and it
is also advisable to inject the temporal margin along the orbit to block the orbital branches of the facial nerve. Double quantities have, of course, to be used. The preliminary injection of novocaine may not succeed in altogether blocking out the burning sensation produced by the alcohol. Oedema of the lids, lasting for a few days, is likely to follow.

ARNOLD SORSBY.


(5) Perrin finds that atropine is more effective as a mydriatic when injected subconjunctivally than when instilled into the conjunctival sac. He employs a solution of 0·5 per cent. strength: of this he injects one drop, to two drops as a maximum, in adults, and half a drop in children.

Eight days should elapse before a second injection is administered. Perrin has frequently given three and sometimes four injections, but thinks that it would seldom, if ever, be necessary to exceed this number.

In ulceration of the cornea, especially of an infected kind, in severe keratitis and in iritis, when it is important to dilate the pupil quickly, and when atropine instilled has failed to do so, a subconjunctival injection will frequently prove effective. In patients, especially old people, in whom there is a real danger of hypertonus developing, or where it may be present, this treatment is, of course, unsuitable.

In children in whom the continued instillation of atropine excites chronic irritation and eczema of the lids, the drug may be safely applied by injection.

Perrin has had no cases of serious toxic manifestations; in a few instances some transient dryness of the tongue and pharynx has been noted.

J. B. Lawford.


(6) The greater part of the literature on the effect of medical diathermy on the eye is taken up with treatment of diseases of the lids, conjunctiva, cornea, and iris. Löffler and Wellisch have published a paper on their results in the application of this method of treatment to the posterior segment of the eye. They use Kowarschik's electrode and apply doses from 0·2 to 0·3
ampères for ten minutes initially, and gradually increase the length of exposure up to twenty minutes. They claim good results with this method of treatment in a large variety of cases. The cases annotated are 31 in number, and the observations lasted for a year, treatment being given daily or every second day over a period embracing up to forty treatments. The diseases treated included retro-bulbar neuritis (a case of which was due to multiple sclerosis), optic atrophy due to tabes, retinitis, choroiditis, and vitreous opacities. In glaucoma, the clinical type of which is not mentioned, the vision and central field were improved in three out of five cases, while in two cases of chronic inflammatory glaucoma no good resulted. Vitreous opacities are said to be absorbed in acute inflammatory and traumatic cases. In a case of pituitary tumour after operation the fields were improved, but the vision remained stationary. Improvement was also said to be obtained in a case of high myopia with fundus changes. The cases quoted are not given in sufficient detail to allow serious criticism, and judging from their general conclusions it may be that the authors are somewhat enthusiastic.

W. S. Duke-Elder.

II.—PATHOLOGY

(1) Cushing, Harvey (Boston) and Bailey, Percival (Chicago).—Hemangiomas of cerebellum and retina (Lindau's disease.) Arch. of Ophth.., September, 1928.

(1) Cushing and Bailey's paper is of importance in that it helps to clarify our conceptions of angiomatosis of the retina. Coats' disease and von Hippel's disease are the usual names by which these changes are designated, but Lindau in 1926 showed that in some cases these retinal changes are associated with (1) the presence of angioblastic cysts in other parts of the central nervous system, notably the cerebellum, (2) the presence of cysts in the kidney and pancreas and (3) the development of hypernephromata and tumours of the suprarenal glands. This syndrome is known as Lindau's disease and 20 cases have been recorded. The details of Cushing and Bailey's case, the twenty-first, are briefly as follows:—On December 8, 1922, a male, aged 30 years, entered the Brigham Hospital, complaining of suboccipital headache. A diagnosis of cerebellar tumour was made from the presence of nystagmus, Rombergism, unsteadiness of gait, etc. and at operation a small cyst was discovered lying superficially at about the level of the foramen magnum and
easily removed. It contained within its wall a small vascular nodule which proved to be a haemangioblastoma. At this time, fundus examination revealed a questionable papilloedema and one observer noted, without mention of the eye involved, that there was an enormous vein which ran downward in a very tortuous course towards the lower retina. In March, 1928, the patient complained of failing vision in the left eye, and an abnormal artery was found to accompany the enlarged vein in its course downwards, there were also extensive proliferative retinitis, and defects in the field. The vessels were traced into a large rounded nodule of pinkish colour, with fibrous tissue on its superior margin, and its surface covered with numerous small blood vessels. Cholesterin crystals were present. In the right eye the only abnormality was the smallness of the arteries. In commenting on this case the authors note that an ophthalmologist who finds angiomatosis of the retina, should realize the need of looking for cerebellar symptoms, since a cerebellar tumour of like sort, most favourable for operation may be co-existent. It is gratifying to note that on looking through the literature of angiomatosis retinae, they found that the true nature of the disease was first recognized by Treacher Collins in 1894, who called attention to the familial character of the disease and pointed out that the essential lesion was a capillary naevus, which in places had undergone cystic degeneration. It is essential to our conception of the disease, that its neoplastic, though benign nature should be realized since the secondary changes of reactive gliosis, iridocyclitis, separation of the retina and glaucoma serve ultimately to conceal the nature of the primary lesion as in cases of Coats' disease.

F. A. W.-N.

(2) Federici, E. (Siena).—A rare case of episcleral granuloma due to a new mycotic species. (Rare granuloma episclerale dovuto ad nuova specie micotica.) Bull. d'Ocul., October, 1929.

(2) An account of an episcleral granuloma which followed an injury with a dry twig of gorse. On removal and microscopic examination the mycelium of the mould "sporormiella macrospora" was found as the causative agent.

L. Paton.

(3) Mariotti, Cesare (Bologna).—The clinical aspects of ocular tuberculosis. (Gli aspetti clinici della tubercolose oculare.) Bull. d'Ocul., October, 1929.

(3) A long and comprehensive monograph, in which the author has made an attempt to give a complete résumé of the tuberculous affections of the eye, and its neighbouring parts.
Methods of diagnosis and suitable therapeutic measures are fully discussed, and numerous cases from his own clinic are cited with full details of course and treatment. The paper is somewhat sparsely illustrated.

The difficulty of making an assumed diagnosis of tubercle into a certain one is, of course, a matter of common experience, and we cannot say that in every case cited this difficulty has been completely overcome. Nevertheless, the author has always taken care to furnish such evidence in support of his diagnosis as it is possible to obtain by clinical and laboratory methods. For instance, by routine X-ray examination of the chest he found that out of his 120 cases, 90 showed definite evidence of lung tubercle.

The paper is divided into two parts, a special part in which the lesions met with in the different regions are described, with appropriate cases—and a general part which deals chiefly with diagnostic methods and their relative value, and with therapeutics.

L. Paton.

III.—BIOCHEMISTRY


(1) The normal lens when treated with 5 per cent. sodium nitro-prusside and a drop of ammonia solution, turns a decided red, whereas the reaction is negative in those parts of the lens which are cataractous. The reaction is due to the presence of cysteine, an amino-acid which on oxidation becomes cystine and so inactive to the nitro-prusside test. The oxidation-reduction process is reversible. It is probable, that neither acid exists in a free state in the tissue, but is combined with glutamic acid in the form of glutathione, a dippeptide which has been found by Hopkins in various parts of the body and can undergo the same oxidation-reduction changes as the acids themselves. Since the presence of this substance is thought to be essential to efficiently functioning cells, Tassman and Karr thought it would be interesting to find out its quantitative presence in the normal and in the cataractous lens. In the normal lens of the pig, it was present to the extent of 0·296 per cent., while in the cataractous lens of human beings, it was entirely absent. No definite reason can as yet be given for this finding, but it is suggested that increased permeability of the capillaries and changes in the permeability of
the lens capsule would permit deleterious substances to come into contact with the lens and disturb the normal state of activity of the glutathione.

The authors appear to be unaware that similar observations on the crystalline lens were made previously by Miss Dorothy Adams (Proc. Roy. Soc. B.98,244, 1925).

F. A. W-N.


(2) Mehlhose reports observations upon the blood sugar of a group of 50 patients suffering from cataract, whose ages range from 34 to 79 years. On admission to hospital the urine was in each case sugar-free. The blood sugar, which was estimated by a modification of the Bang test, averaged 0'078 grms. per cent. A high sugar (greater than 0'12 grms. per cent.) was present in only three patients. The sugar tolerance test made in ten subjects, when 50 grms. of sugar were given after a period of starvation and the blood sugar estimated one and a half hours later, showed an average of 0'13 and returned to 0'061.

The results of this estimation tend to show that a diminished sugar tolerance is rare in cataractous patients. The author fails to agree with Malkin and Krassikot who found a hyperglycaemia from 35'7 to 57'9 per cent. in people with senile cataract, or with Baldwin and Bartels who found a blood sugar greater than 0'12 grms. per cent. in 75 per cent. of cataractous patients examined. On the other hand, they supported the conclusions of Langlands who found hyperglycaemia in only 15 per cent. of patients with senile cataract, and his figures approximate more closely with those of O'Brien and Myers who obtained the still lower figures of 5'5 per cent.

W. S. Duke-Elder.

IV.—SCLERA


Terrien and Favory hold that in comparison with diffuse inflammation of the sclerotic (tenonitis) with or without suppuration, localized suppurative inflammation of staphylococcic
origin is rare, and only in recent years has it been recognized as a separate type and carefully investigated. They exclude from this group all cases occurring in connection with wounds, accidental or operative, and cases of tuberculous origin.

Two types occur, distinguishable by their position and severity: an anterior in which the focus of inflammation is in the neighbourhood of the limbus, and a posterior; the latter being the more serious owing to the frequent involvement of deeper structures.

The authors give clinical notes of three cases, the ages of the patients being 14, 16 and 22 years, and refer to others recorded by Morax, Dupuy-Dutemps and others. In nearly all the examples on record a purely staphylococcal origin was established; in one instance a pneumococcus was also present. In the "posterior" type of case extension of inflammation into the orbital cellular tissue is the rule; involvement of important structures usually follows, evidenced by oculo-motor paralysis and papillitis. Gross defect of vision may result and may be, though it seldom is, permanent. In one of the authors' cases detachment of the retina was a late development, its site corresponding exactly to that of the episcleral abscess.

Though there is frequently a history of suppuration in other parts of the body preceding the onset of the scleral inflammation, the source of infection of the eye cannot always be determined. One of Terrien's patients had had a whitlow on his thumb three weeks previously; another had had a series of boils for some months before admission.

J. B. Lawford.

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V.—GENERAL MEDICINE


(1) Several cases have been reported showing peculiar disturbances of the ocular muscles following epidemic encephalitis. Velhagen reports his observations on a series of eight cases which showed a peculiarity of this nature. The symptom complex involved in each case, is lethargy (or occasionally pathological insomnia), irritability, headaches, and a transformation of the general character and disposition, associated with disturbances of the muscles of the eye. These disturbances are characterized by spasmodic movements by which the eye-balls are turned upwards
and inwards to a maximal degree, while the lids remain open. The spasm sometimes lasts for several hours, and the patient is completely unable to bring about voluntary release. They occur without apparent reason, although fixation of a near object tends to bring them on. No abnormality in the function of the ocular muscles when the spasm was not in evidence could be discovered, and the fundus and the vision in each case were normal; the only other pathological accompaniment was a paralysis of the accommodation in one case which, it will be noted, is a common sequela of encephalitis. A curious associated phenomenon is the occurrence of deep sleep after the spasm has developed, and while the patient is asleep, typical cataleptic symptoms may be observed, and headache and fatigue may follow on waking.

The origin of the phenomenon is unknown. Since somewhat similar attacks or epileptiform fits may be caused by hyperventilation, Stockart concluded that the spasm was due to a vascular anaemia in a convergence centre in the cortex. It is suggested that arterio-sclerosis may be a contributing factor, or syphilis, or other vascular diseases. It is characteristic that as time goes on the severity of the attacks increases, but the author concludes that hysteria does not enter into the question. He considers that a study of this condition may lead to valuable information with regard to the physiology of sleep. From an analysis of the symptoms he concludes that the site of the causal lesion is extra-pyramidal and is probably located in the region of the aqueduct of Sylvius. The incidence of the attack seems associated with the act of convergence, and he suggests that the lesion may be an affection in the region of the nuclei of the fifth nerve and of Mauthner’s sleep centre which are situated close together. He suggests that a connection between the two may be established through the medium of fibres from the oculo-motor muscles running along the fifth nerve into the centre for sleep. These theoretical deductions are based on evidence which is by no means conclusive, but the study of this peculiar symptom complex is of more than ordinary interest.

W. S. Duke-Elder.


(2) Foster Kennedy suggests that epidemic encephalitis is probably not the new disease we are apt to think it is, because as long ago as 1718 “Schlafkrankheit” was described by Carerarius, who noted the difficulty of raising the eyelids. The tremors, spasms and athetotic movements of the limbs which are
one of the characteristics of encephalitis are probably due to disease of the basal ganglia which removes the normal cortical control from the lower centres. Stammering, and forcible closure of the lids are of precisely the same nature, though ptosis, often in association with a paralysis of both external recti is due to a direct attack on the third nucleus. Some of these muscular spasms are remarkably rhythmic in character and may affect only one eye. Thus in four of the author’s patients “the regular jumping of one eyeball in one direction furnished a highly startling and somewhat uncanny experience.” All types of palsy and spasm may occur, with wide fluctuations in severity from day to day or week to week, though the commonest syndrome is a diminution or loss of conjugate associated vertical movements of the eyeballs. The appearance of Argyll Robertson pupil is explained by inflammatory processes attacking the fibres connecting the colliculus with the third nerve nucleus because in this position fibres for accommodation are almost remote. As an alternative lesion, there may be isolated paralysis of accommodation which is usually bilateral. Nystagmus is almost the rule in acute encephalitis and may be of both cerebellar and labyrinthine varieties. Retrobulbar neuritis is rare but the author has seen one case, and he also had a series of cases which he was able to associate as a “clinical encephalitic group” in which the late occurrence of papilloedema was a constant feature. Apart from this group of patients who did not exhibit the general clinical colouring now associated with epidemic encephalitis, papilloedema is extremely rare.

VI.—TRACHOMA


(1) From the time when epithelial cell inclusions were first discovered by F. Prowaczek in 1907 their significance has been a matter of dispute, and Bengtson has undertaken this work in an endeavour to elucidate the significance of these bodies. Film preparations were examined from 230 cases of trachoma, and tarsal cartilages and conjunctiva from a few cases of trachoma were also sectioned and examined. For the sake of clearness, the author describes the various stages in the development of the inclusion body in the reverse order as follows:—(1) The first stage is that in which minute reddish or violet staining forms (Giemsia stain) looking like
small, often paired, cocci are seen emerging from the protoplasm of the cell. (2) This is preceded by a stage in which the small reddish or violet cocci lie embedded in a blue staining matrix or mantle in the cytoplasm of the epithelial cell. (3) Before this stage the structure of the mantle is less dense and may appear diphtheroidal or rod-like, the individual organisms being sometimes seen very distinctly. (4) In many specimens, rod-like bacteria, though few in number, may be found outside the cells. The author concludes from these observations that a rod-shaped organism enters the epithelial cell and begins to multiply; that the cell offers a mechanical resistance which causes the organisms to grow in a densely packed mass and that eventually it forms a ferment, possibly lysozyme, which causes lysis of the invading bacteria, reducing them to a débris of fine reddish staining coccoid forms. In sections of conjunctiva, groups of rod forms have been found sometimes in dense masses and associated with bodies giving a bipolar staining reaction. Gram-negative rod-shaped organisms were cultured from the conjunctivae of trachomatous patients and injected at various times into the conjunctivae of a number of guinea pigs. Preparations made within a day or two of inoculation showed enormous numbers of the pink staining coccoïd bodies while the organisms originally introduced were comparatively few in number and stained feebly with Giemsa. The inference, therefore, was that the original rod-shaped organisms had been converted into these reddish staining coccoïd bodies—the so-called elementary body of Prowazek.

F. A. W-N.


(2) In studying the effects of the inoculation of the conjunctiva of monkeys with fresh material obtained from an undoubted and active case of trachoma (Stages I or II) Nicolle, Cuénod and Blaizot, have shown that it is not only necessary to obtain a susceptible species, macacus inuus, but also as a preliminary to note that sterile scarifications do not result in the development of a folliculosis. Under these conditions the authors found that a condition indistinguishable from human trachoma could be produced not only by the inoculation of fresh material but also by the inoculation of material which had been passed through a Berkefeld V filter. In fact they believe that the active principle of trachoma infection is contained in a filtrable virus.

Madam C. Trapesontzwea, who is a biologist, has experimentally inoculated the conjunctiva of six human beings with material from trachoma cases which had been passed through a special
filter, impermeable to micro-organisms, which she obtained from Germany. The persons experimented on were blind, except in one case, and permission for the experiment was obtained either from them or from their parents. Their ages were 6, 7, 14, 22, 52 and 55 years.

The inoculation was made either subconjunctivally or as drops on the scarified conjunctiva. All the cases remained under observation for a period of not less than six weeks, without revealing any sign of trachoma. There appears to be no reason to doubt that the material used actually came from cases of trachoma.

The authoress then obtained the assistance of some well-known ophthalmic surgeons for the purpose of submitting herself to experiment. This was carried out in three stages. First 0.4 c.c. of filtrate was injected subconjunctivally under the upper lid. As there was no particular result a fortnight later the other eye was inoculated, the lower conjunctiva being scarified, and filtered trachoma material dropped on into the lower fornix; after this 0.4 c.c. of filtrate was injected under the lower conjunctiva. Again no permanent result was obtained after a month, and further inoculation in the eye last attacked was carried out by subconjunctival injection, scarification and instillation of trachoma filtrate. Six months after the last experiment the authoress's eyes were examined by two professors of ophthalmology and pronounced to be healthy.

The endurance of the distinguished authoress and her belief in the non-filtratability of the trachoma virus are remarkable.

It is, however, necessary to remind her that of the stages of trachoma, T. IV is never contagious, T. III only occasionally contagious, T. II frequently contagious, while T. I is par excellence the stage from which all inoculations should be made, as here cell degeneration with its accompanying chemical changes has not yet begun.

A. F. MacCallan.


(3) The area over which Talbot's observations ranged has a population of about 15,000 natives and 1,000 Europeans.

He examined the children in two French schools, containing 309 children (226 girls, 83 boys), and four Franco-Arabic schools with 1,097 children (23 girls, 1,074 boys), a total of 1,406 pupils. In his statistical report Talbot adopts (and advocates) MacCallan's well-known classification of cases into four groups.
He gives detailed statistics, but it will suffice to note that in the French (European) schools the percentage of trachoma cases was 34.9 among the boys and 30.5 among the girls. In the Franco-Arabic schools, containing a large preponderance of boys, the percentage for both sexes was 53.

Some points of interest emerge from examination of the age of those affected. In the Franco-Arabic schools the number of children below the age of five is negligible; of 746 trachoma cases 56.1 per cent. were between 5 and 10 years, and 40.9 per cent. between 10 and 15 years. The author interprets these figures as indicating that familial (i.e., before school attendance) contagion is responsible for the majority of cases and that contagion at school is exceptional. This is probably attributable to precautionary measures now in force in the schools.

Talbot devotes considerable space to the consideration of the spontaneous recovery of trachoma and his observations are generally in accord with those of Meyerhof, Morax and others, who hold that spontaneous recovery without treatment, is not uncommon. It is seen, however, more frequently in infantile cases than in those arising in adolescents and adults.

J. B. LAWFORD.


(4) Dwijkoff and Lewkoewa have investigated the cytological reaction of the conjunctiva in trachoma by studying smears obtained from the trachomatous conjunctiva after scratching the tarsal conjunctiva and the tories with a blunt scalpel. As controls other conjunctival affections were utilized; all stages of trachoma were investigated, and each stage was found to have characteristics of its own. They could find no definite evidence of any inflammatory process, the dominant cells being lymphoid cells and lymphoblasts in various stages of development. They argue that trachoma is not an inflammatory but an hyperplastic process, the new formation being of the lymphoid group. The existence of the hyperplastic process is further supported by the evidence the authors have seen of the formation of erythrocytes and myelocytes in addition to the lymphocytes. The process is, therefore, not of the type of lymphoid reaction to a foreign body; rather is the trachomatous process analogous to leukaemia. Plasma cells are only a concomitant feature in this process, being developed from lymphocytes, whose own development goes on
unchecked during all the stages of trachoma. In other conjunctival affections there are no such changes as are demonstrated by this method of investigation, which may, therefore, be used for differential diagnosis.

**ARNOLD SORSBY.**


This is a clear and interesting exposition of an intricate subject within 46 pages. In view of the enormous amount of literature on trachoma and allied conditions and, for most of us, the impracticability of going through it, this paper is well worth reading.

Aust sums up his investigations as follows:—

The inclusion-infection of genital origin of the eye in adults is a disease of several months’ duration, which, even in untreated cases, has not till now led to development of pannus and scars.

It is the benign course of the disease that distinguishes it from trachoma.

In most cases inclusion-infection is derived from one’s own genitals. Therefore, wherever inclusion-blenorrhoea of the newborn occurs, probably a corresponding number of infections in the adults could be proved. But the absolute frequency of its occurrence in individual countries depends not only upon the number of cases of inclusion-blenorrhoea and genital inclusion-infection, but also on the standard of hygiene of the people of those countries.

It has in common with inclusion-blenorrhoea not only its causal agent but also its clinical behaviour and benign course. The inclusion-infection (of the adults), inclusion-blenorrhoea and genital inclusion-infection together constitute Lindner’s group of “genital trachoma.”

Swimming-bath conjunctivitis is the term applied to acute follicular inflammations seen after using public baths and occurring both sporadically and endemically. Neither clinically nor aetiologically is it a specific pathological entity. Aetiologically, at least, two sources come under consideration; one of these is the inclusion-virus of genital origin. The vast majority of acute
Trachoma

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Follicular inflammations arising from the use of public baths are due to noxious agents other than the inclusion-virus; the cases in which the inclusion-virus occurs are distinguished by a severer course of the disease.

The occurrence of inclusion-positive cases after using public baths denotes nothing more than one of the possibilities of infection due to the original localization of the virus. They are to be designated inclusion-infections, as they, in contrast to swimming-bath conjunctivitis, constitute a clinically and aetiologically established independent entity.

Hence, the general term swimming-bath conjunctivitis for acute follicular inflammations occurring after the use of public baths does not apply to inclusion-infections.

The inferences as to the nature and significance of Prowaczek's inclusion findings, derived from the clinical course of swimming-bath conjunctivitis, rest on false assumptions and must, therefore, be rejected.

The author's own investigations regarding swimming-bath conjunctivitis both microscopically and aetiologically have brought to light nothing against the standpoint of Lindner as to the specificity of the diseases caused by the inclusion-virus from the genitals. Lindner's assumption of the existence of two morphologically similar strains, which differ biologically only in their power to withstand the protective resistance of the conjunctiva, fully suffices to include all inclusion-infections observed till now under a single aetiological designation.

D. V. Giri.


In this long paper, Angelucci sets out to prove the connection between the constitutional condition which shows itself in the enlargement of lymphatic structures in the alimentary canal, and trachoma. He has in the past insisted on the opposition which seems to exist between phthisis and trachoma, and here deals with a condition which is favourable.

He brings forward a large amount of evidence showing that children suffering from trachoma are improved and sometimes completely relieved, by the treatment of adenoids.

The paper, which cannot easily be condensed, is in effect part of Angelucci's thesis on the importance of constitutional states in the production of local maladies.

Harold Grimsdale.
THE BRITISH JOURNAL OF OPHTHALMOLOGY

VII.—LACRYMAL APPARATUS


(1) In an article clearly illustrated by five plates containing 19 diagrams, Kofler discusses the vagaries observed not only in the size and structure of the lacrymal bone, but also in the surrounding bony area. The lacrymal bone itself, whilst not showing any racial characteristics, exhibits great individual variations. It has been observed to be completely absent; it is frequently segmented, suggesting a multiple origin. Some of the variations discussed have a practical bearing on operative interferences in this region, and those interested are referred to the original article, which does not lend itself readily to summarizing.

ARNOLD SORSBY.

(2) Beauvieux (Bordeaux).—Concerning extirpation of the lacrymal sac. (Apropos de l’extirpation du Sac lacrymal). Arch. d’Ophthal., April, 1929.

(2) “The procedures for extirpation of the lacrymal sac are legion.” Despite this statement Beauvieux describes the method which he practises. In essentials it varies but little from that generally adopted; he emphasizes the necessity of attention to certain details, to ensure a wholly satisfactory result. Effective haemostasis is essential: “With haemorrhage in the wound, the operation is inelegant, always incomplete and badly executed.” Methodical and deliberate dissection of the sac is equally indispensable, any fragment of mucous membrane left in the wound means later trouble in the form of small abscesses or pockets of pus, or even infection of cellular tissue. Beauvieux employs a small gouge (shown in a woodcut) for all the steps of the operation except the final division of the pedicle of the sac in the nasal duct: this should be as far down the canal as possible, and should be followed by curettage of the wall of the duct. Drainage of the lacrymal fossa is useless, except in cases in which there has been infection of the tissues surrounding the sac. Two or three stitches are inserted and primary union is the usual result.

The site and extent of the skin incision, and the succeeding steps of the operation are shown in a series of five illustrations.

J. B. LAWFORD.

(3) After discussing the methods advocated by various surgeons, Duverger describes the procedure which he has followed in the last 50 cases; “it has always proved effective, suppressing haemorrhage completely.”

Ten minutes before operating and after dilatation of the lower canaliculus, Duverger injects, as deeply as possible, into the lacrimal sac, a solution containing chlorhydrate of cocaine 10 per cent., 0·25; solution of adrenaline (1—1000), 0·75; methylene blue 1 per cent., 2 drops. The injection is repeated three or four times, washing out gradually the muco-pus contained in the sac; the latter finally remains filled with solution and lightly coloured blue.

The delay of ten minutes is essential; during that interval the adrenaline penetrates deeply and devascularizes the area of operation. If no large vessel is cut, the operation can be completed “almost dry” and with perfect accuracy, the outlines of the sac being well defined by the coloured fluid therein.

The author states that he has had no case of secondary haemorrhage. This method is not well adapted for cases in which there have been repeated attacks of pericystitis, or for tuberculous cases. There is no mention of toxic disturbance following the use of cocaine.

J. B. Lawford.

VIII.—MISCELLANEOUS

(1) Cosenza, Giovanni (Firenze).—A case of chronic inflammation and symmetrical cystic dilation of the meibomian glands. (Un caso di infiammazione cronica e dilatazione cistica simmetrica delle ghiandole del Meibomio). Boll. d’Ocul., November, 1929.

(1) In this case the glands of the outer third of each upper lid were affected, and the cause was found to be an infection with the bacillus of Friedlander, of which a pure culture was obtained.

R. A. Greeves.

(2) Bardelli, L. (Florence).—Allergic conjunctivitis. (Congiuntiviti Allergiche). Boll. d’Ocul., October, 1929.

(2) Bardelli unites under this name a group of conjunctival affections, resulting from a peculiar reaction to certain stimuli of
the adenoid layer of the conjunctiva. These arise after a variable period of sensitization, and disappear quickly on removal of the irritant. He has had occasion to observe various groups of cases in which the condition was set up by different causes, viz. one group due to a hair dye containing a diamido-benzine, one due to certain drugs, such as atropine and eserine, and lastly a group associated with the presence of molluscum contagiosum on the eyelid border.

R. A. Greeves.

(3) Bietti, Giambattista (Bologna).—Histological researches and technical observations on tattooing of the cornea with platinum chloride, silver nitrate and gold chloride + silver nitrate. (Ricerche istologiche e osservazioni tecniche sul tatuaggio dell'occhio con cloruro di platino nitrato d'argento e cloruro d'oro + nitrato d'argento). Boll. d'Ocul., November, 1929.

After a brief résumé of the methods of tattooing the cornea, Bietti gives his own experiences with various preparations, and describes the results of his microscopical investigations in cases where each of them has been used.

R. A. Greeves.


Full clinical and microscopical details of the case are given. The primary focus of the infection was an abscess in the sole of the left foot, and this had caused a metastatic leptomeningitis.

R. A. Greeves.

BOOK NOTICES


The third volume of the Kurzes Handbuch der Ophthalmologie is devoted to the orbit, the nasal sinuses, the lids, lacrimal apparatus, and the ocular muscles. In general terms it may be said that it maintains the standard set by its predecessors in the wealth of