labours of the manager, Mrs. Kelf, over the whole period of existence of the Journal, be overlooked. Lastly, the printing and publication have been in the hands of Messrs. George Pulman and Sons, to whom the management are indebted for the meticulous efficiency and punctuality with which they have carried out the work.

So much for the past. What of the future? We feel that the prospects are good; and we end by expressing the hope that when *The British Journal of Ophthalmology* celebrates its jubilee it may be as healthy, both scientifically and financially, as it is at present.

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**ABSTRACTS**

**I.—MEDICAL OPHTHALMOLOGY**


(1) Cox's paper opens with a table giving the differential diagnosis between the congenital and acquired varieties of this condition, the latter being known as spasmus nutans. The main points are that the congenital condition is present at birth, persists throughout life, is binocular and has head movements which appear to compensate for the eye movements. Spasmus nutans, on the other hand, develops after birth usually between the fourth and twelfth months, and disappears about the third year, it may be monocular and the head movements have no relation with those of the eye. The author's case was congenital and beyond lateral movements of the head and eyes and some hypermetropia showed nothing abnormal. There was no consanguinity in the parents but there was a definite family history of the condition, 7 out of 30 known members of the family having the head and eye movements. The distribution of these is shown in a chart which accompanies the article.

F. A. W-N.


(2) Abeles has noticed the presence of medullated nerve fibres of the retina in 9 out of 15 cases of oxycephaly, whereas the incidence of this condition in the general population has been stated to
be from 0.3 to 0.24 per cent. Medullated retinal nerve fibres were also found in four cases of marked macrocephaly, 2 of marked brachycephaly, 2 of marked dolichocephaly and one of trigonocephaly. The correlation between cranial deformities and the presence of medullated nerve fibres is capable of various explanations.—1. It may be a parallel mark of the maldevelopment which has produced the cranial defects. 2. It may be due to weakness of the lamina cribrosa since the absence of this structure in the rabbit’s eye is said to be the cause of the myelinisation of its retinal nerve fibres. Weakness of the lamina could be produced in two ways (a) by stretching due to papilloedema (b) by restriction of the normal movements of the eyes owing to the shallowness of the orbits. If the oxycephaly is so marked as to produce optic atrophy, the medullation of the retinal nerve fibres disappears.

F. A. W-N.


(3) After pointing out the rarity of visual fields which show defects of such a kind as to merit the term binasal hemianopia, Duncan reviews the reported cases and discusses their aetiology. He points out that most frequently such visual fields are seen in cases of papilloedema associated with increased intra-cranial pressure—the suggestion being that internal hydrocephalus with a distended third ventricle allows pressure to bear upon the optic tracts or nerves adjacent to the chiasma. Other cases are seen in optic atrophy from various causes, in syphilitic meningitis and rarely from arterio-sclerosis showing thickened carotid arteries to indent the outer chiasmal fibres. He adds three cases to those already reported, two associated with optic atrophy following papilloedema accompanying increased intra-cranial pressure and one associated with syphilitic optic atrophy. The visual fields showing the stages in the development of the binasal hemianopia are reproduced.

R. C. Davenport.


(4) Velter describes the clinical features of the chiasmal syndrome and discusses their diagnostic and pathological significance. In his paper he has divided the subject into two main groups: (1) Tumours and cysts; (2) Lesions, other than tumours, such as
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trauma, inflammation, aneurysms and other diseases. The neoplasms are classified according to their anatomical situation
(a) Intra-sellar. Adenomata of the pituitary gland—chromophobe, acidophil, basophil; (b) Craniopharyngioma; (c) Retro-sellar, sub-sellar and supra-sellar neoplasms including epithelioma of the sphenoid and chordoma, an embryonic neoplasm arising from the spheno-occipital synostosis; (d) Third ventricle neoplasms; (e) Cholesteatomata; (f) Chiasmal glioma.

The author endeavours to bring out clinical points in the differential diagnosis of these neoplasms. The behaviour of the visual field defects, the presence and course of papilloedema and optic atrophy are of particular interest to the ophthalmologist. Papilloedema is exceptional in acidophil adenomata, it is sometimes well marked in craniopharyngioma and has been noted in epithelioma of the sphenoid and chordoma of the spheno-occipital synostosis. It is a later complication in third ventricle neoplasms. Optic atrophy occurs very late in basophil adenomata of the pituitary, it is rapid and sometimes unilateral in craniopharyngioma and well marked in third ventricle neoplasms. Bitemporal hemianopia is inconstant in basophil adenomata; may be atypical in retrosellar and sub-sellar neoplasms; and in third ventricle neoplasms it may affect the inferior part of the visual field on both sides.

The results of radiography, ventriculography and lumbar puncture afford considerable help in some cases in arriving at a pathological diagnosis. General medical signs of a particular character are evident in association with the adenomata of the pituitary gland and differentiate them from each other and are also evident in neoplasms involving the floor of the third ventricle when polydypsia, polyuria, cardiovascular and respiratory disorders become manifest.

The significance of local disturbances affecting the sensory divisions of the fifth nerves to extra-ocular muscles, and the cavernous sinus is discussed.

Adenomata of the pituitary are radiosensitive but the other neoplasms require surgical attention when this is feasible.

In the second group of lesions the author describes traumatic lesions, sphenoidal sinusitis producing superior hemianopia, syphilitic meningitis and arachnoiditis affecting the chiasma and optic nerves. The results of operations on cases of arachnoiditis in the sellar region are interestingly described. Some good seems to have come from stripping the felt-like adhesions from the affected chiasma and optic nerves.

The paper is illustrated by skiagrams and case reports demonstrating the clinical features of various lesions.

H. B. Stallard.

Bertsch has collected in this paper certain ocular and general medical disorders in which there is a disturbance of fat metabolism characterized by lipoid infiltration of reticulo-endothelial cells. Xanthelasma, arcus senilis, Gaucher’s disease, Niemann-Pick’s disease and the Christian-Schiiller disease are described.

Gaucher’s disease is familial, shows a preference for females, has an insidious onset and a chronic course lasting several years and terminating in cachexia and death. The spleen, liver, lymph nodes, visceral ganglia and bone marrow are enlarged and infiltrated by large round or polygonal-shaped cells which contain a small eccentric nucleus which shows variations in form and amount of chromatin. Debris of blood and haematogenous pigment is also present.

The author quotes Redslob and Géry who, at an autopsy on a case of Gaucher’s disease, found typical cells in the choroid among the chromatophores and stroma cells. These cells, characteristic of Gaucher’s disease, were smaller in size than elsewhere in the body and had a small feebly staining nucleus, the protoplasm being homogeneous in some and fibrillary and containing vacuoles in others. There is a denser infiltration of cells near the papilla.

Mandlebaum is quoted as having found yellowish-brown cuneiform areas in the conjunctiva with the base towards the limbus, appearing at first on the nasal side and then on the temporal side at the sites where pingueculae occur.

In infants suffering from Gaucher’s disease the eyes lose their expression, an intermittent bilateral convergent squint develops, both eyes being deviated up and in in some cases. The infant fails to follow a light, ophthalmoscopic examination reveals a normal fundus.

Niemann-Pick’s disease is also a familial disorder affecting Jewish infants within the first two months of life. It is characterized by enlargement of the liver and spleen, brown pigmentation of uncovered parts of the skin, psychic decadence, immobility, apathy, progressive cachexia and death. Vision is conserved to the end in the pure form of this disease but it is sometimes associated with amaurotic family idiocy, the author quotes from the literature 7 out of 27 cases in which this occurred.

Christian-Schiiller disease is characterized by areas of softening in the bones of the vault of the skull, destruction of the anterior part of the sella turcica, polydypsia and polyuria from hypophyseal involvement and exophthalmos from an orbital deposit of
large polygonal-shaped cells the cytoplasm of which contains vacuoles of material that take fatty stains.

Deposits of fatty material have also been noted in the sclera and retina and papilloedema is described as a complication following an intracranial deposit.

The paper contains some interesting clinical and pathological facts about these diseases.

H. B. Stallard.


(6) Toulan and Sarrouy discuss the complexities of the bacteriological aspects of bacillary dysentery. Of the ocular manifestations scleroconjunctivitis coincides with the appearance of arthritis and in some cases urethritis. Cosse and Delord are quoted as having observed this complication in 12 cases out of 420 and Nolf and his collaborators in the Belgian Army in 20 out of 1,200 cases. Scleroconjunctivitis comes on slowly about the 10th to the 20th day of the illness when in certain less severe cases the intestinal symptoms have disappeared. Sometimes it precedes arthritis but more often it follows it. In addition to the generalised conjunctival hyperaemia there is some circumcorneal injection having a violet tinge and secretion from the conjunctival sac is sparse. The cure of this complication is rapid in 8-10 days.

Iritis is rare, it appears more slowly than scleroconjunctivitis and comes on about the 20th-40th day. The reaction, pain and photophobia are very moderate, cure is often rapid but recurrences have been noted. Cyclitis, parenchymatous keratitis, and Descemetitis are other complications. The synechiae are readily broken down by atropinization and secondary glaucoma does not complicate this picture.

The authors report the details of a case of a woman aged 44 years who developed dysentery and on the 9th day had conjunctivitis in both eyes, with little discharge which cleared up after 3 days with instillations of argyrol drops.

On the 17th day of her illness rheumatic pains were experienced in the metacarpophalangeal joints of the right hand and 6 days later in the tarsus, the left shoulder and right sterno-clavicular articulation, these joints becoming swollen, red and painful.

On the 23rd day a plastic iritis occurred in the left eye, responded well to atropine and was cured in 13 days. On the 39th day a Descemetitis occurred in the left eye coinciding with an exacerbation of inflammation in the right shoulder joint and 3 or 4 fine vessels appeared in the deeper layers of the cornea. On the 76th day of the disease, and 53 days after the onset of iridocyclitis, all signs of irritation had disappeared but a small opacity remained in the cornea.
Ocular complications described by other authors are corneal ulceration, serpiginous ulcer of the cornea, paralysis of an external rectus muscle cured in 3 weeks, polyneuritis, choroidal haemorrhages and dacryoadenitis.

In discussing the pathogenesis the authors consider three hypotheses. That the ocular manifestations are due to (1) the dysentery bacillus (2) its toxin (3) some associated micro-organism such as the bacillus coli or pyogenic bacilli like the streptococcus and staphylococcus which gain entrance to the blood stream through the intestinal ulcers.

Conjunctival cultures and the aspiration fluid from affected joint cavities fail to reveal any bacillus responsible for dysentery. Bacteriological examinations of the intra-ocular tissues have revealed streptococci and staphylococci in a few cases but no dysentery bacilli. Bacillary septicaemia is rare in dysentery, Dudgeon having found a Flexner type of bacillus in 2 cases only.

The intra-venous injections of filtered cultures of B. Shiga into animals have produced iritis, arthritis and caecal lesions and thus afford some evidence in favour of toxins as the cause of the above lesions. Although specific agglutinins have been found in the fluid aspirated from joints they have not in the experience of the authors been detected in the aqueous fluid or tears.

The possibility of secondary infection by the bacillus coli, streptococcus and staphylococcus is discussed.

In concluding the authors suggest that the conjunctivitis which is benign and fleeting is a toxic lesion and that the iridocyclitis is microbic in origin.

H. B. STALLARD.


(7) Frost reviews the aetiology of papilloedema and discusses some points of anatomical importance in relation to it. He describes 2 cases in young men aged 24 and 25 years, respectively, who were affected with papilloedema associated with posterior sinusitis. Premonitory symptoms were transient attacks of blurred vision and later pain in and behind the eye increased by using the eyes for near work. Papilloedema was of sudden onset in these cases and vision became seriously disturbed. The blind spot was enlarged and a caeco-central scotoma or sector defect appeared. A peripapillary retinal detachment is also mentioned among the pathological changes. In discussing the mechanism by which papilloedema is produced in these cases he is disposed to regard lymph stasis in the central part of the optic nerve as being the most probable explanation of the changes. This lymph
stasis is effected by oedema at the apex of the orbit compressing the optic nerve. Papilloedema disappeared, visual acuity and visual field changes recovered on drainage or aeration of the affected sinuses.

H. B. Stallard.

Baratta (Parma).—The visual field, intra-ocular pressure and pressure in the retinal arteries in pregnancy and the puerperium. (Campovisivo, pressione arteriosa retinica, pressione endoculare in gravidanza e puerperio). Boll. d'Ocul., May, 1936.

Baratta examined 30 pregnant women in the late stages; he found in four a diminished field on the temporal side. In one only this persisted after delivery. In almost all, the retinal arterial pressure was higher before delivery. The intra-ocular pressure was normal. He thinks the modifications of the field to be due to retinal exhaustion.

HAROLD GRIMSDALE.

II.—MISCELLANEOUS


Hippert describes the clinical features of two cases of intermittent exophthalmos. Both were males, in one the onset was noted at the age of 36 years and the other at 11 years of age and the left orbit was affected in both these cases.

Exophthalmos was induced by inclining the head forward and towards the affected side, a tight collar, lifting a heavy weight, straining, holding the breath and forcible expiration, and in one case, singing brought on an attack. Exophthalmos disappeared when the head was raised to the vertical position. During the exophthalmos the retinal veins were engorged and vision affected but between attacks the visual acuity returned to normal.

Enophthalmos was evident on the affected side, and was probably due to atrophy of the orbital fat.

The author discusses the clinical features, differential diagnosis, pathology, prognosis, complications and treatment of this disorder.

He quotes some interesting physiological facts made by Birsch-Hirschfeld on postural exophthalmos. Inclining the head forward produces an exophthalmos of 0·7 mm. which increases to 1·7 mm.
after two minutes compression of the anterior facial vein exophthalmos increases to 3 mm. In the author's second case this vein was compressed and the exophthalmos increased. Compression of the neck causes 1.5 mm. of exophthalmos which increases to 27 mm. when the head is inclined forward.

In discussing the pathology of intermittent exophthalmos the author suggests that narrowing of the entrance of the superior ophthalmic vein into the cavernous sinus, narrowing of the angular vein, the facial vein and the junction of the common facial and jugular veins plays a mechanical part in venous stasis at the apex of the orbit.

Radiographs of some cases have shown narrowing of the sphenoidal fissure and in the author's two cases this was associated with irregularity of the lumen of the fissure and the presence of a bony mass projecting into the upper and outer angle.

Phleboliths have also been noted. In a few cases pulsation of the ophthalmic artery has been transmitted to the varicocele. A generalised varicose state affecting the pampiniform plexus, veins in mucus membranes and haemorrhoids is evident.

Complications in the nature of orbital and cerebral haemorrhages and optic atrophy are rare. The differential diagnosis between orbital varicocele, orbital haemorrhage, vascular orbital neoplasm and pulsatile exophthalmos is discussed.

Some surgeons have apparently treated this condition by ligaturing the superior ophthalmic veins and dissecting out the varicocele, and others by the injection of sclerosing solutions such as quinine urethane into the dilated veins.

H. B. STALLARD.


(2) In this study Sobaiński made observations on 80 normal persons, whose ages ranged from 7 to 75 years, with Bailliart's dynamometer and Fick's tonometer.

It was found that the pressure in the retinal vein varied with the age of the persons. In the three age groups (7 to 15, 15 to 40, and over 40) this pressure rose progressively, being on an average in the first group, minimal, lower than the intra-ocular pressure 16-22 mm. Hg, and maximal, 28 mm. Hg, and in the third 23 and 36 mm. Hg., respectively.

The pressure in the retinal artery in the first age group averaged 68/40 mm. Hg, and above the age of 15, minimal, 66-48 mm. Hg, maximal, 90-80 mm. Hg.
The ratio of the minimal venous pressure to the minimal arterial varies between 1:19 and 1:3. The ratio of the pressure in the retinal artery to the general blood pressure (taken in the brachial artery is, minimal, between 1:14 and 1:15, and, maximal, 1:13 and 1:16.

The pressure in the retinal capillaries must under physiological conditions on an average be 55/33 mm. Hg, varying according to the age of the individual between 28-39 mm. Hg (diastolic pressure and 48-63 (systolic).

THOS. SNOWBALL.


In the first group the simultaneously raised pressure in the central retinal artery is the factor that protects the optic nerve and retina from the effects of the increased tension; even a tension of 35-40 mm. Hg produces no optic atrophy or excavation of the disc if the diastolic pressure in the retinal artery is sufficiently high (over 70 mm. Hg).

In the second group, to which the names "Glaucoma without increased tension" and "Pseudoglaucoma" have been given, there is always a subnormal general and local blood pressure, with injurious effects from the normal tension on the retinal circulation and the nutrition of the retina.

Simple optic atrophy and the glaucomatous changes in the field, it is stated, arise from disturbances in the retinal circulation, which occur not only with an increased intra-ocular tension (as in all varieties of true glaucoma) but also with a fall in the diastolic pressure in the retinal artery (pseudoglaucoma) through which the normal relation between it and the tension is altered.

The fundamental difference between pseudo- and true glaucoma lies in the excavation round the edge of the optic disc which is found in the latter. Where such excavation occurs even with normal tension in the course of simple optic atrophy, it is absolute proof of a previous rise of tension in the eye.

In every case of pseudo- and real glaucoma the retinal circulation as well as the tension should be examined, and in treatment
the tension reduced to a level corresponding to the diastolic pressure in the retinal artery.

In the treatment of cases of general arterial hypertension complicated with glaucoma the intra-ocular pressure must be reduced first.

THOS. SNOWBALL.


(4) In his study of the aetiology of optic atrophy in pseudoglaucoma Sobanski noted a definite resemblance in the clinical symptoms between it and the optic atrophy of tabes dorsalis from the point of view of the disturbances in the circulation common to both.

In the majority of tabetics there is a fall in the general and local (central artery of the retina) blood pressure, especially in the diastolic pressure, and this is the rule in cases of tabes with progressive optic atrophy.

Three tables are given (a) of cases of tabes without optic atrophy (in which the pressure in the central retinal artery, tension, vision and fields are normal): (b) cases of early tabes with low blood pressure and constantly low tension—less than 14 mm. Hg—where the visual fields and optic discs are normal): (c) 33 cases of tabes with optic atrophy (with mostly low blood pressure and the tension so high as to interfere with the proper nutrition of the retina, thereby producing a simple optic atrophy analogous to that in pseudoglaucoma).

These tables show that there is a close connection between the onset of optic atrophy and the state of the circulation and particularly the height of the diastolic pressure.

The method of treatment evolved from these considerations was (1) to reduce the intra-ocular pressure by miotics (and in most of the 33 cases operation, usually cyclodialysis); (2) to raise the general and local blood pressure by the use of tonics and cardiac stimulants; (3) to carry out specific treatment, but only after the circulation in the retina is improved.

The bad results on the vision so often previously obtained by exclusively antiluetic treatment are then not to be feared, but specific treatment may be continued only under the strictest control of the circulatory system and the tension, as the normal relation obtained by treatment between these two may suddenly become altered.

As the vision and circulation improve the tonics are discarded and the pilocarpine is gradually reduced, but continued for a long
time, even in the intervals between the courses of specific treatment.

The use of pilocarpine and tonics is also recommended as a prophylactic measure in all cases, in which the above mentioned changes in the retina are observed or suspected, during the whole course of the antiluetic treatment.

The author is convinced that this mode of treatment of tabetic optic atrophy was never harmful but in most cases attended by improvement, and he urges that it be put to a practical test.

THOS. SNOWBALL.


(5) Duggan's article is of interest not only from the therapeutic but also from the pathological standpoint. The vaso-dilator he employed was sodium nitrite given by intravenous injection in 10 per cent. solution the dose being 100 mg. The injections were administered daily for a period varying from 5-7 days. In 8 out of 9 acute cases reported, marked benefit resulted from the treatment. In cases of long standing, improvement was also noted, but more injections were usually needed. The pathological basis of treatment by vaso-dilators is the supposition that retrobulbar neuritis is caused by constriction of some of the vessels supplying the optic nerve and the chiasma.

The rapid healing obtained in many cases of this disease is evidence against severe organic changes and points to a vascular nutritional disturbance of the optic nerve. The same cause is also indicated by the favourable results obtained after operation on the sinuses in which the surgical interference brings about a reflex engorgement of the optic nerves, and the improvement which results from administration of typhoid vaccine points the same way. Arguing from the good results obtained in tobacco amblyopia and retrobulbar neuritis by the use of vaso-dilators, the author puts forward the suggestion that the primary lesion in disseminated sclerosis is interference with the blood supply of the white matter of the central nervous system. Glial proliferation and myeloid degeneration are thus secondary changes due to the anoxaemia. The good results obtained by cervico-dorsal sympathectomy point to the same conclusion. The author recommends the intravenous injection of vaso-dilators in other types of amblyopia, e.g., those due to poisoning by tobacco, thallium, lead, quinine and optochin.

F. A. W-N.
MISCELLANEOUS


(6) The action of di-nitrophenol as an accelerator of metabolism has been known for many years. As long ago as 1885 di-nitronaphthol was found to have this action in dogs and a few years later similar observations were made with di-nitrophenol. In 1933, the drug was given to nine patients in doses of 3-5 mg. daily for prolonged periods. Weight was lost without the need for any dietetic restrictions and no undesirable symptoms were encountered. In spite of this, it was recommended that the drug should be used only under strictly controlled conditions. Since this time, di-nitrophenol in some form or other, has been used for reduction of weight by about 100,000 patients. The complications reported comprised the following:—cutaneous eruptions, congestive infection of the ear, jaundice, agranulocytic angina, peripheral neuritis, abortion, functional damage of the liver and heart muscles. Seven fatalities were also reported. In April, 1935, Horner saw a patient with bilateral incipient cataracts who had been taking di-nitrophenol for reduction of weight. Since then a total of about 50 cases have been reported. The earliest changes consist in bilateral dust-like opacities beneath the anterior capsule of the lens, and the development of a saucer-shaped granular opacity in the posterior layers of the lens, giving a "cloth of gold reflex" with the slit-lamp. The opacities rapidly invade the cortex and the nucleus, the whole lens becoming first greyish then pearl-like. As a result of these changes it swells and secondary glaucoma may ensue. In the early stages, the eye may develop 2-3 D. of hypermetropia. No cause has yet been found for the development of cataract in these patients. Immature lenses removed intra-capsularly and placed in a 2 per cent. solution of di-nitrophenol failed to develop any additional opacity, rats which are susceptible to cataract, failed to develop it when the drug was added to their diet, and the calcium content of the blood in patients with di-nitrophenol cataract was found to be normal.

The incidence of this complication is not high and lies probably between 0.1 and 1 per cent. Individual susceptibility varies widely. In 27 cases, the average length of time that passed after the drug was first taken until the cataract developed was 15 months. In 18 patients cataract developed after the drug had been discontinued for an average period of 7 months. It is remarkable that during the war, when many cases of di-nitrophenol poisoning occurred in French munition workers, no cataract was reported. Once the opacity has developed, anything short of surgical treatment has been found ineffective. The operation recommended by the author comprises an incision with the Graefe knife, one
half the usual size with a conjunctival flap; peripheral iridotomy, broad capsulotomy and expression by pressure and lavage of the anterior chamber. Should the anterior chamber be too shallow for the performance of a correct incision, retrobulbar injection of procaine hydrochloride and epinephrin will cause it to deepen. In the discussion following the author's paper Bedell mentioned that there were no fewer than 17 proprietary preparations containing di-nitrophenol; Frost that he had seen a case of partial optic atrophy due to the drug and Whedon that he had cured a case of incipient di-nitrophenol cataract by Gifford's hot water treatment every hour combined with instillation of 4 per cent. dionine three times daily.

F. A. W-N.

BOOK NOTICES


This large volume contains some 40 papers by various authors connected with the Clinic at Bologna. The papers are reprinted from various journals; some of them have been noted in abstracts in this journal as from time to time they have appeared; the papers are of different sizes and are placed so that the works of each author appear together; this does not make for easy consecutive reading.

The first, the longest and most important paper, "on tuberculosis as affecting the eye," is from the pen of Prof. Di Marzio, and is extracted from a work on extra-pulmonary tuberculosis. Other papers on tuberculosis are contributed by Caramazza. Biozzi has two papers on Fuchs' heterochromia and this he considers to be in many cases tuberculous in origin. It will be noted, therefore, that tuberculosis has a considerable part in these works. From the form of the volume, no index is possible apart from the table of contents at the beginning.

The whole shows that, at Bologna, the Clinic is alive; it may be highly congratulated on the record of work done.


Throughout the year approximately seventy new patients were examined and treated and ten operations were performed every working day. Of these about 77 per cent. were by religion Moslems, 11·6 per cent. were Christians and the rest were Jews.