Pathological examination of the eye

When the eye was bisected a spherical white tumour the size of a small cherry was seen attached to the sclera on the temporal side. It had the appearance of growing from the sclera and its macroscopic appearance was similar to that of scleral tissue. The attachment to the sclera was stalk-like. At its periphery it was again firmly adherent to the tunics of the eye and appeared here to be growing from the sclera.

The tumour on section showed a spindle-celled, non-pigmented sarcoma.

The fact that the tumour is non-pigmented is in favour of its scleral origin: most choroidal tumours are pigmented, but not all. On the whole, I (E.W.A.) am in favour of the choroidal origin, and I consider that it has arisen from non-pigmented cells in the choroid, and that its stalk-like attachment to the sclerotic is an invasion of the sclera by tumour cells.

ANNUAL CONGRESS OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

The Twelfth Annual Congress of the Society was held at Glasgow on Thursday, Friday and Saturday, May 1-3, 1924.

This is the first extra-Metropolitan meeting of the Congress since it became an annual event. The meetings were well attended, and the admirable local arrangements did much to render the Congress an unqualified success.

The President, Dr. A. Maitland Ramsay, was in the chair, and the meetings were held in the Department of Zoology of the Glasgow University, and on Friday evening in the Anatomical Theatre.

The proceedings opened by a cordial address of welcome to the Congress by Sir Donald MacAlister, Bart., Principal of the University. This was immediately followed by the discussion, which was on "The Physiology and Pathology of the Pupil Reactions."

Sir John Parsons opened with a very comprehensive survey of our present knowledge of the subject from the physiological standpoint. He described the musculature and nerve supply of the pupil, the proof of the presence of dilatator fibres, the light, sensory and associated reflexes. The various experimental and pathological proofs of the course of the light reflex and the very close association of the visual and pupil responses to light were also reviewed.

He discussed the retained reaction of the pupil to light in cases of optic atrophy with blindness. He next considered the state of
our knowledge with regard to the pupillo-constrictor fibres in the mid-brain, and the course of the pupillo-dilatator fibres. The pupillo-
dilatator centre was most probably situated in the hypothalamic region lateral to the infundibulum. Among other agencies that effect
variations in size of the pupil he mentioned the activities of the endocrine glands. He also referred to the paradoxical pupil
dilatation. The course of the various fibres was traced and the paper was illustrated by some excellent slides. In conclusion, the author mentioned thirteen facts, which must be satisfied by any
scheme which was to represent the pupillary light reflex.

Dr. Edwin Bramwell dealt with the subject from the point of view of the physician, who is accustomed to appraise a physical sign in accordance with the value of the information it affords. In speaking of brain tumours he referred to Bianchi's cases of fore-frontal tumour in which paroxysmal dilatation and contraction of the contra-lateral pupil was observed and which were believed to be of the nature of Jacksonian fits. He said that abnormalities of the pupil and associated phenomena which result from lesions of the sympathetic path he regarded as of the greatest value to the physician in diagnosis of many different conditions. He mentioned that a man might have miosis and an intra-thoracic aneurism but that the contracted pupil might be a tabetic manifestation. He questioned the value of the Wernicke hemianopic pupillary re-
action, pointing out that doubt had been thrown on the value of the sign by its occurrence in cases in which the lesion appeared to involve the visual fibres above the termination in the optic tract. He emphasised the importance of the Argyll Robertson pupil, and drew attention to the fact that it occasionally incurred in cases that did not give the serological tests for syphilis, and that it had been recorded in disseminated sclerosis, lethargic encephalitis, chronic alcoholism, trauma, and mid-brain tumours. He also discussed the various views put forward as to the causation of this symptom.

Mr. Affleck Greeses, reviewing the subject from the opthalmological standpoint, dealt with the changes of size at different periods of life. He said that inequality of the pupils is frequently present in normal persons, and that hippus was frequently present in healthy individuals. The various pathological states of the pupil were then reviewed and the various conditions causing contraction, dilatation, alteration in shape, colour and inequality of the pupils. Alteration in colour and congenital abnormalities were described, and he concluded with the details of a case of cyclic contraction and dilatation of the pupil.

Mr. Treacher Collins spoke of several interesting developmental conditions and his contribution was illustrated with numerous lantern-slides.
Mr. Foster Moore described a series of 7 cases; 5 in females, and 2 in males, with the Argyll Robertson pupil reaction but unassociated with syphilis, and without any evidence of parasypilitic or any other nervous disorder. The cases were probably congenital, and one case had been under observation for 40 years. The condition was frequently unilateral, it was not associated with paralysis of accommodation, and the pupils dilated well with mydriatics. The contraction with convergence and dilatation when convergence was released was characteristically slow.

Mr. Paton spoke of the Argyll Robertson pupil, and made the suggestion that the initial causal lesion might lie in a little recess lying behind the pineal gland and dipping down between it and the corpora quadrigemina. In this recess the spirochaetes might lie dormant for a long time.

Mr. G. F. Alexander also spoke.

In the afternoon Professor Graham Kerr read a paper on "An Experiment in Binocular Vision." His experiment was devised to prove that by fusion of similar images increased intensity of the mental impression was obtained. In his opinion the summation of the images was similar to that occurring in animals possessing dozens, or even hundreds, of eyes.

The significance of the experiment was discussed by Sir John Parsons, Mr. Paton and Mr. Alexander.

Sir Arnold Lawson read a paper on "A Case of Bilateral Symmetrical Detachments of the Retina with Normal Vision." This was a very unusual case, in which a detachment was discovered on the outer side in the right eye. On further examination a similar detachment was found in the other eye, of which there had been no complaint. The patient had had a fall on the back of her head in 1915. General, X-ray, and rhinological examinations were negative. The patient was treated by rest in bed. The condition remained unchanged and is the same now as it was a year ago.

Mr. Hepburn said he thought the condition might be haemorrhagic in origin. Mr. Cridland also spoke.

Mr. A. F. MacCallan read a paper on "Twenty Years' Ophthalmic Work in Egypt," in which he described the numerous difficulties that had to be overcome before he was able to bring the ophthalmic service in Egypt to its present state of efficiency.

Mr. Leslie Paton read a paper on "Some Ocular Complications of Spontaneous Subarachnoid Haemorrhage," in which he gave a valuable survey of the subject with copious references. The anterior part of the circle of Willis was the most common site of origin of the haemorrhage. He considered that haematomata into the nerve sheath was much commoner than might be deduced from the published statistics. The oculo-motor was the nerve by far most frequently affected. Papilloedema might follow the rupture.
in a few hours if there was a block at the optic foramen. It might not occur for a week, and in some cases it was delayed some months. An unruptured aneurysm has been ascribed as the cause of ophthalmoplegic migraine. He recorded two cases which had come under his own observation, and he concluded that the subhyaloid haemorrhages that were present in them had tracked along the nerve sheath and come through the lamina cribrosa.

Prof. Snellen read a paper on "the Absence of Diplopia in Strabismus Concomitans," in which he reviewed the current theories and gave his own explanation.

The paper was discussed by Messrs. Alexander, and Harrison Butler the former of whom described an interesting case.

Dr. Brownlow Riddell's paper was on "Eye Symptoms in the early Diagnosis of Disseminated Sclerosis." He had been much impressed by the frequency which with a retro-bulbar neuritis or a transient diplopia preceded, often by a long interval, the other evidences of the disease. He insisted upon all such cases being submitted to a thorough general examination and he quoted several striking cases which substantiated this.

The paper gave rise to an interesting discussion.

Dr. G. E. de Schweinitz said that disseminated sclerosis had been described as the disease of mystery. He reviewed several of the aetiological factors and referred to the current literature on the subject. He cited an interesting case with a central scotoma; this improved after an operation on one of the accessory sinuses, but later the patient developed definite multiple sclerosis. He said that the mere elimination of sinus disease was not sufficient and he urged more careful bacteriological investigation as to the kind of toxins involved.

Messrs. B. Graves, J. Gray Clegg, Harrison Butler, Ballantyne, Paton, Johnson Taylor, Cridland, and Leask also contributed to the discussion.

The Clinical Meeting was held at the Glasgow Eye Infirmary on the morning of May 2nd. The meeting was well attended and a number of interesting cases were shown.

Drs. Harrison Butler, Basil Graves and W. C. Souter devoted themselves to demonstrating the clinical use of the corneal microscope and slit-lamp, the first named also demonstrated Hess's apparatus for the investigation of muscle paresis.

The General Business Meeting was held at 2.30 p.m., and this was followed by a meeting of British Ophthalmologists to receive the report of the Council of British Ophthalmologists recorded in the last number of this journal.

Sir Donald MacAlister, the Principal of the University, and Lady MacAlister held a Reception at which they kindly entertained the members attending the Congress.
On Friday evening Mr. J. Gray Clegg read a paper on "Central Scotoma in Anterior Uveitis."

Dr. Ivy McKenzie read an interesting paper on the "Trigeminal Nerve as an integrating mechanism between the Nose and the Eyes" in which she discussed the anatomical distribution of the fifth nerve from the point of view of its functions as an integrating mechanism in the tissues to which it is related.

She said it cannot be too strongly emphasized that sensory nerves convey impulses from the centre to the periphery, and she gave instances in support of this contention. She said that in looking for the meaning of certain obscure and somewhat mild and transient nutritional disturbances one ought to look at the medullary conditions, whether toxic or due to increased irritability.

Sir John Parsons said he did not agree with the statement that the antidromic theory was fully proved, and spoke of a number of cases of excision of the gasserian ganglion that had come under his observation. He spoke of the relation between the trigeminal nerve and headache, which he said had all the characteristics of a primitive nerve response.

Dr. J. A. Wilson raised the question of sympathetic ophthalmia being possibly caused by impulses passing down a sensory nerve, and spoke of some recent work on herpes.

Mr. Leslie Paton spoke of Head's classical experiments. He said that the whole elaborate structure of trophic impulses passing down the sensory fibres was built on very slender evidence and could not be accepted as definitely proved. He spoke on the question of the virus of herpes and pointed out that it was only in connection with the herpes febrilis type that the virus had been found, and that the work did not refer to herpes zoster.

Dr. Ida C. Mann read a paper on "Coloboma iridis and its Embryology." The subject was very clearly and exhaustively dealt with, and after mentioning the various theories the author gave her own explanation of the condition with embryological proofs. The lecture was illustrated by numerous drawings, which were shown on the screen.

Professor Bryce complimented the author on the paper which he said was an answer to those who said that embryology had been worked out. He regarded the conclusions as to the development of coloboma as very reasonable.

Mr. Treacher Collins mentioned two other ways in which congenital colobomata might be produced, viz., abnormal adhesion of the pupillary membrane to the lens capsule and, exceptionally, by the failure of or late separation of the lens from the back of the cornea.

Dr. Harrison Butler gave a lucid demonstration illustrated by numerous drawings of his own on the "Anatomy of the Normal
Lens as Revealed by the Slit-Lamp." His slides showed the normal lens in many of its variations, the anterior Y, the posterior inverted Y, various fissures and the lens nuclei. He spoke of small areas of apparently cataractous changes which were present at all ages, and were as far as was known of no significance. He spoke of the literature at present available and entered a plea for simpler terms.

Mr. B. Graves read a paper which was also illustrated on the "Histology and Slit-Lamp Features of a Limbus Tumour," in which his object was to correlate the clinical, and histological features of the tumour, which was an innocent melanoma, with the appearances as revealed by the slit-lamp.

On Saturday, May 3, Dr. John Marshall read a paper on "A Case of Persistent Hyaloid Artery." The patient was a child aged three years, and the eye was excised on account of increasing buphthalmos. Dr. Marshall illustrated his pathological findings with lantern slides, and raised the question of operative treatment.

Mr. Treacher Collins and Sir John Parsons both spoke and also discussed the question of operation in these cases.

Dr. John Rowan's paper on "Iridectomy for Congenital Cataract" gave rise to a very interesting discussion in which the following took part Messrs. Ballantyne, Sir Arnold Lawson, J. Gray Clegg, Cunningham, Johnson Taylor, Sym, J. H. Fisher, Sir John Parsons, Treacher Collins, Killen, Paton, Cyril Walker and J. A. Wilson.

Dr. G. F. Alexander read two papers, one "On an Operation in Failure of Iridectomy for Glaucoma," in which he described a method he had used for reopening a corneal wound with the minimal risk of secondary infection. In the second paper on "Advantages of a Strong Solution of Atropin in Removal of Cataract" he advocated the use of a 5 per cent. solution of this drug one hour before operation.

Dr. S. Spence Meighan read a paper on "Two Cases of Traumatic Vesicular Keratitis." He dwelt on the difficulty of diagnosis in the first instance, and the ineffectiveness of treatment in this condition. This paper also gave rise to a good discussion in which Messrs. Ballantyne, Hepburn, Affleck Greeves, Cameron, Johnson Taylor, J. A. Wilson, Levy, Stewart-Barrie, Sir Arnold Lawson and Mr. Paton took part.

Dr. W. B. Inglis-Pollock read the concluding paper on the "Advantages of Early Division in Senile Cataract Operations," in which he advocated the division of the capsule with a Ziegler's knife, on the fifteenth day after the extraction of the cataract.

A very interesting and successful feature of the Congress was the scientific museum, which was housed in the spacious laboratory of the Department of Zoology, and included the following exhibits:
Prof. Bryce:
Specimens illustrative of the Development and Anatomy of the Eye, from the Department of Anatomy.

Prof. Graham Kerr:
Microscopic Preparations illustrative of the Comparative Anatomy of the Eye, from the Department of Zoology. Demonstration of the Use of the Binocular Eyepiece with High-Power Microscopic Objectives.

Dr. R. A. Houston, Lecturer in Physical Optics:
Diagrams illustrating the Results of the Glasgow Colour-Vision Survey.

Dr. A. Maitland Ramsay and Dr. Alex. Garrow:
Autochrome Plates of Diseases of the Eye.

Dr. John Rowan:
Autochrome Photographs of Diseases of the Eye.

Dr. Leslie Buchanan:
Ophthalmological Instruments, Books, etc., of Local Historical interest, including many of Mackenzie’s original instruments and books.

Dr. P. H. Adams:
Microscopic Preparations of (a) Secondary Carcinoma of the Choroid, (b) Siderosis Bulbi.

Mr. W. B. Inglis Pollock:
(1) The Results in Rabbits of Removal of the Ciliary Ganglion, the Accessory Ganglia, and the Superior Cervical Sympathetic Ganglion.

Dr. A. J. Ballantyne:
Fundus Drawings. These excellent drawings were made by the exhibitor.

Dr. John Marshall:
Pathological Specimens.

Dr. John Gilchrist:
Two Cases of Orbital Tumour. Specimens and Microscopical sections.

Mr. Fisher said, at the conclusion of the Congress, that those who had been visitors would desire to take this opportunity of expressing their thanks to the President and local members who had worked so hard to make the Congress a success. He proposed a vote of thanks to the University for their gracious reception and accommodation, and he especially wished that Professor Graham Kerr should be thanked for the hospitality he had extended in his department, and for the great interest he had taken in the meetings.

Drs. Ballantyne and Wright Thomson assisted the President
as local secretaries, and were responsible with him for the admirable arrangements throughout the Congress.

The annual dinner was held at the Central Station Hotel, Glasgow, on May 1. There were 69 present, the arrangements were admirable, and reflected great credit on the local secretaries.

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ANNOTATIONS

Alternating Current Lighting and Eyestrain

We would draw the attention of readers to a letter from Mr. J. C. Elvy, Consulting Engineer, addressed to the Editor of the *Lancet*, which appears in the issue for April 26 last. Mr. Elvy thinks that there may be some connection between alternating current lighting and eyestrain. Personally, he finds himself more comfortable when working in his office with direct current lighting than when reading at home with alternating current lighting. He also says: "It would be interesting to hear the experience of surgeons when conducting delicate operations under these two different conditions—alternating versus direct—as with alternating it is possible to detect several images of bright metallic instruments especially when these are in motion, similar to "cinematograph" action. The "cinematograph" effect is most pronounced in the low wattage "Neon" nightlight bulbs when used on an alternating current circuit. Perhaps ophthalmic surgeons could throw some light on the apparent increase in the use of spectacles in certain areas."

The Editor remarks that it is undoubtedly the case that with a cycle of alternation of less than 25 there is a perceptible flicker which is trying to the eyes. He also remarks that while, as he understands, there are 25-cycle plants which supply lighting as well as power, there is no supply of alternating current at less than 50 alternations for lighting. Even at this speed there may be a slight cyclic variation in the light, especially from the low-power high-voltage metal filament incandescent lamp, in which the mass of the filament, and, therefore, the stored heat energy is very low. The Editor of the *Lancet* recommends the point as one which ophthalmic surgeons might consider.

It may be of interest to record an instance in which a factory was lighted by alternating current. In one of the sheds there were several circular saws and the management had deemed it necessary to transform the current supplying this shed to a constant current in order to avoid risk of injury; because if the rate of rotation of the saws was such that the movement of the teeth was in phase with the alternation of the current, the saw would appear to be stationary.