ABSTRACTS

EAR.

The effect on Bone Conduction of filling the Auditory Meatus with Mercury in cases of Ménière's Disease. DIDA DEDERDING (Copenhagen). (*Acta Oto-Laryngologica*, Vol. xvi., fasc. 2-3.)

Both Runge's and the writer's earlier experiments appear to show that filling the external auditory meatus with mercury has no influence upon bone conduction in fixation of the stapes.

In a normal individual the pouring in of water would bring about slight lengthening of bone conduction as, for example, when the tragus is gently closed but, with the use of mercury, bone conduction is shortened as in firm closure of the tragus. The result is, therefore, the positive result obtained in Gellé's test and indicates a mobile stapes.

The result of the mercury test in the author's series of patients with Ménière's symptoms is shown in each case in the tables at the conclusion of the article.

In Group I. it is the bone conduction in particular that is shortened; these are cases of mobile stapes.

In Group II. a fairly large group exhibits no change because there is stapes fixation, as definite as, for example, in otosclerosis; but these cases are not sufferers from otosclerosis, as is shown by their considerable variation in hearing from time to time and in their changing bone conduction.

In Groups III. and IV., which show lengthening of bone conduction, some of the cases have shown considerable variation on previous occasions, but a number of others exhibited a negative Rinne and yet could not be true otosclerotics, because the bone conduction had been lengthened by the instillation.

The writer believes that the tests prove that, in the majority of Ménière patients, we have to do with an affection of sound conduction. H. V. FORSTER.

Our Ménière Treatment (Principles and Results). DIDA DEDERDING (Copenhagen). (*Acta Oto-Laryngologica*, Vol. xvi., fasc. 2-3.)

After carrying out a considerable amount of work in efforts to treat successfully patients suffering from Ménière's symptoms, the conclusion was gradually reached that these symptoms were not only a matter of local but also of general disease, and that the extra-aural manifestations exhibit the same capricious changes which characterise the acoustic and the vestibular phenomena.

Headache, for example, was found in 91 per cent. of the cases; other frequent phenomena were vasomotor rhinitis, chilliness, congestions, rheumatism, gastro-intestinal disturbances, and nervous phenomena, such as fatigue, depression, insomnia, impairment of memory.

It became evident that so far as the labyrinth was concerned an accumulation of fluid had to be dealt with, and that treatment would depend on securing an increased output of fluid.

These patients really had an abnormal water metabolism. As pilocarpine treatment had been disappointing, diuretics were used. To keep a check on the result of treatment the patients were weighed. Fair success followed the use of diuretics (agurin, euphyllin, calcium-diuretin) but sylergan gave the most striking results. As the use of diuretics could not be without a deleterious effect later, these were avoided if possible and the patients were put on a restricted diet, particularly as to fluid and the taking of salt. (A diet poor in fluid but not in calories.)

To increase vasomotor tone, massage, gymnastics, exercise, fresh air and Finsen light baths were used. Many of these patients perspired insufficiently and they felt better later when the skin began to act normally.

Further medical investigation is needed to exclude other troubles, for example, lesions of the kidneys and heart, endocrine deficiencies, etc.

Local treatment is also advised—for example, catheterisation to prevent the ossicles becoming immobile until such time as the mucous membranes and labyrinth improve.

The success of treatment in a large number of patients is reviewed and appears to have been considerable, both as regards the Ménière's symptoms and the state of the hearing. H. V. FORSTER.

The Körner Septum in the Mastoid Process. JORGEN MOLLER (Copenhagen). (*Acta Oto-Laryngologica*, Vol. xvi., fasc. 2-3.)

Körner had described a temporal bone in which the petrous portion and squamous portion were completely distinct one from another.

This fact, and the clinical importance of the observations by Jorgen Moller in a number of subjects, of a more or less complete separation of the petrous mastoid cells from those of the squamous, encouraged him to study anatomically sixteen temporal bones.

In seven of these an unbroken septum was found between the two groups of cells, and in the remaining eight a septum which was clearly shown but which had in it either small isolated perforations or spongy tissue at the level of the external auditory meatus by means of which the two groups of cells communicated with one another.

Even in the cases in which the pneumatisation process had been arrested, the cells of the squamous portion were generally well developed. Moreover, the cells occupying the tip of the mastoid process proceeded, completely or in part, from the squamous portion. The squamous cells chiefly occupied the region confined to the side of the external auditory meatus. One could, therefore, quite easily overlook in the course of an operation this important group of cells, through which an inflammatory process could spread from the antrum to the tip without the greater part of the cells of the mastoid process presenting pathological changes.

In these operations, therefore, it is advisable to excavate deeply between the sinus and facial nerve areas, and here one often meets with a compact osseous lamella which covers the squamous cells.

Translation of author's abstract.

H. V. FORSTER.

Three Cases of Brain Abscess. Drs. GUNS and JARDIN. (*Zent. f. Hals.*, 1932, Vol. xviii., p. 44.)

I. A patient, aged 28, had had a middle-ear suppuration at the age of 8, which was followed by eight years discharge. From then the ear had been dry until three weeks before examination (8th November 1931). The present illness had started with pain in the right ear. At the first examination the ear was discharging and a polypus was found and removed. Five days later there was a recurrence of pain with right-sided headache, vertigo and nausea. The mucosa of the middle ear was polypoid; there was profuse purulent discharge with a sensation of pressure and throbbing pain in the mastoid process radiating up to the vertex. There was a horizontal spontaneous nystagmus to the left. Temperature of 39·5° C., increased leucocytes and negative blood culture. The cerebrospinal fluid was slightly turbid and under increased pressure, with 125 cells per cubic millimetre, 10 per cent. lymphocytes, the rest polymorphonuclear. When the mastoid was opened and the temporal lobe freely exposed pus was seen issuing from a perforation in the dura. The abscess was drained for six weeks and a cure resulted. On culture *B. proteus* was obtained from the pus.

II. A patient, 48 years old, had had a left-sided suppurative otitis media three years before. Since then the ear occasionally discharged. On the 16th March 1931, the patient was admitted to the clinic suffering from severe headache. There were exostoses in the left external auditory meatus, Romberg sign negative, no spontaneous nystagmus. There was cervical pain with rigidity and a sense of compression and throbbing pain in the left mastoid. The left pupil

was contracted but both pupils reacted well. Temperature 39° C. Aphasia was present. Leucocytes were increased. The cerebrospinal fluid, although not under increased pressure, was turbid, with 930 cells to the cubic millimetre, of which 13 per cent. were lymphocytes. No organisms were found either in the cerebrospinal fluid or in the blood. At operation on the following day a large cholesteatoma which had exposed the sinus and the temporal lobe was found. The sinus was pale but not thrombosed. Puncture of the temporal lobe with a stout needle produced 12 c.c. of foul pus. The method of drainage was by Lemaitre's method; a filiform bougie for twelve hours, then an india-rubber tube changed every forty-eight hours until the calibre was increased to 5 mm. Drainage was continued for two months with consequent cure. *B. proteus mirabalis* was found in the pus.

III. A patient, aged 44 years, had been under treatment for a long time for severe headaches. At 5 years of age he had had an acute left-sided otitis media with mastoiditis, for which an operation had been performed. For ten days before his admission to the clinic, on 26th May 1931, the left ear had been discharging and he had had severe left-sided headache and pain in the ear. On admission the temperature was 39·9° C., the ear was discharging and there was throbbing pain with a sensation of pressure in the left mastoid. Motor aphasia was present. There was stiffness of the neck with a positive Kernig sign. The pupils reacted normally. There had been no vomiting. The examination of cerebrospinal fluid was valueless owing to contamination with blood. At operation a large cholesteatoma was found; the lateral sinus was normal. The dura over the temporal lobe was congested and puncture produced a brownish fluid. On the introduction of a pair of angled forceps a large quantity of thick yellow pus escaped. Drainage was effected for the first six days with a 5-mm. tube, and then with an 8-mm. tube.

When the paper was published this patient was still under treatment. The aphasia had lasted longer than in the previous case, and on the third day after operation there was a transient right-sided hemiplegia, accompanied by a rise of leucocytes to 12,200. These unfavourable signs are subsiding and the authors give a good prognosis. *Enterococcus* was found in the pus.

The authors point out that of these three patients two were walking about until their admission. They believe that the leucocyte count is a valuable guide to the severity of the infection and a check on the other indications. The essential point is the drainage of the abscess and, nearly as important, the ventilation of the abscess cavity through the drainage tube in order to hinder the development of anaërobes and to stimulate the healing of the abscess wall. They believe that the patients should be put in a sitting-up position as soon as possible after

the operation. They point out the remarkable latency of the brain abscess in all three cases. Two of the patients came up for consultation about their headaches. The authors regard lumbar puncture as important for prognosis as well as for diagnosis. If no organisms are found in the fluid the prognosis is good, although in all three cases leucocytes greatly exceeded the lymphocytes.

F. W. WATKYN-THOMAS.

Metabolism Examination in Otosclerosis. Drs. BEHRENDT, HANS and BERBERICH. (*Zent. f. Hals.*, 1932, Bd. xviii., p. 47.)

Although it is a common clinical experience that the progress of otosclerosis varies in close relation with the condition of the body as a whole, up to the present exact positive evidence for regarding otosclerosis as a constitutional illness is still small. Leicher has reported slight lowering of the calcium content of the serum (1 to 3 milligrams per cent.); Berberich has shown a definite diminution which may amount to one-fifth of the normal content; Stern has found a slight lowering of the blood uric acid and a shifting of the albumin-globulin-fraction. Such facts, although valuable, are too slight to be a basis for any serious constructive work. In this paper the authors have examined the total acid-base relationship. Their results are as follows:—

1. Estimation of the total serum CO_2, shows a great lowering of the alkali reserve.

2. The lactic acid content of the serum is likewise definitely lowered.

3. The base-variation is either lowered or just within the lowest border of the normal.

4. Sunlight irradiation can restore the base-variation.

5. Estimation of acid secretion in the urine of the total acid coefficient and the ammonia coefficient furnished no results from which legitimate deductions could be drawn.

As a result of these examinations the authors believe that this constitutional disturbance of the acid-base content differs from the usual acidosis. While the authors were engaged upon this research, Sendrail, Lasalle, and Bonpunt, working in Escat's Clinic, have carried out similar research. They have shown a lowering of the calcium and phosphorus in the blood serum and a slight acidosis in fifteen cases of otosclerosis. They have noticed an alteration in thyroid function which may be causative, although Escat found that deterioration persisted in spite of thyroid administration.

The fact of the hyperphosphate deficiency observed in otosclerosis, which also is usual in rickets, supports the views expressed. The authors are of the opinion that, although in principle their results

support the views of Mayer and of Voss, the observed metabolic variations suggest the importance of further research on the relation of internal secretion to the condition. F. W. WATKYN-THOMAS.

The Anatomical and Clinical Forms of Brain Abscess of Otitic Origin and their Prognosis. JEAN PIQUET. (*Zent. f. Hals.*, 1932, Vol. xviii., p. 43.)

The prognosis of otogenous brain abscesses is closely related to their anatomical forms. Three well-defined kinds may be distinguished:—the solitary limited abscess, suppurative encephalitis (multiple brain abscess and diffuse encephalitic abscess), and diffuse non-suppurative encephalitis.

The first kind, the solitary limited brain abscess, is the abscess of the classical descriptions. It is in immediate relation to the causative bony lesion and lies at varying depths in the temporo-sphenoidal lobe. Its distinguishing feature is that it remains limited in one fixed region of the brain without a tendency to spread to outlying parts. In spite of this there is no limiting capsule except the zone of round cell infiltration with the inner zone of macrophage and polymorphonuclear cells which surround the central necrotic nervous tissue. The author states that there is always a strong adhesion of the dura to the surrounding tissues, so that invasion of the subarachnoid space is prevented. It is a question whether in all such cases the abscess should not be opened and drained through this area, as such a route offers almost certain immunity against meningitis. The prognosis is relatively favourable in abscesses of this kind. When the diagnosis is made sufficiently early and the operation is properly carried out, 90 out of 100 cases recover. The absence of fever, the typical "brain pressure headache" and the progressive intellectual weakening in association with persistent chronic otitis media are of clinical importance. Acute exacerbations of the otitis and symptoms of spreading bone infection may be completely absent. Choked disc appears first at a later stage and its absence is not evidence against the presence of a brain abscess. Lumbar puncture gives an increase of cells, both lymphocytes and polymorphonuclear, but the fluid is sterile. This aseptic serous meningitis is a common phenomenon in circumscribed brain abscess. Amnesia, aphasia, lethargy and fits are rare. Vertigo is of little value in the diagnosis of abscess as it may be due to other causes, *e.g.* labyrinth. Nystagmus is not often met with and, contrary to the usual opinion, the author regards it as the expression of an intracranial hypertension like the dilated pupil and external rectus palsy. Special localising signs are not to be expected.

In the second form, the suppurative encephalitis, the characteristic feature is the diffusion of the infective process through multiple foci.

Originally, no doubt, it must have started as a single abscess, but an abscess with a tendency to spread. It is accompanied by fever, and the slowing of the pulse, although not so marked as it sometimes is in the first form, is usually clearly present. The diagnosis between this and the first form is made by the persistence of symptoms after an abscess has been drained. The important question is then whether further operative interference should be attempted. When the signs of increased pressure remain stationary and the patient's general condition appears steady, it is probably better to wait.

In the third form, the acute non-suppurative encephalitis, there is an inflammatory œdema without any abscess formation. Clinically it may be the initial stage of a suppurative encephalitis, but it can undergo spontaneous cure or cause death without ever passing to the second stage. In the fatal cases there is a far-reaching destruction of the brain substance. It is noteworthy that this form is not infrequently found in acute otitis media, unlike the other two forms which are usually found in the chronic. But even in acute otitis media it is not an early complication, but appears in the second or third week. The temperature is raised (38·5° to 40° C.), but the outstanding features are torpor and headache. Other symptoms of meningeal and cerebral infection (raised intracranial pressure, cerebrospinal fluid changes, etc.) vary in occurrence and in intensity, as do the nerve paralyses (facial, abducens, oculomotor). The proper line of treatment is to remove the causative bone lesion and not to explore the brain unless there are definite signs of abscess.

The author summarises the results as follows:—In the limited solitary brain abscess, 90 cures in 100 cases. In the suppurative encephalitis, 40 to 50 cures in 100 cases. In diffuse non-suppurative encephalitis the prognosis is very bad. F. W. WATKYN-THOMAS.

On the Nervous System of the Membrana Tympani and the Sympathetic Nerve-cells in the Outer Ear. HACHIRO KAJI. (*Japanese Journal of Medical Sciences*, xii. *Oto-Rhino-Laryngology*, p. 96.)

The author states his conclusions as follows:—

(1) The fact that the method of silver impregnation and its application in the study of the membrana tympani has been considered extremely difficult is simply due to defective performance of the technique. If the membrana tympani is first treated with a caustic-soda solution of a given strength, as has been done by Schultze and Stöhr, the membrane can easily be stained and some of the successful specimens thus prepared can be used as the ground for establishing one's scientific view.

(2) For the study of the nerve in the membrana tympani, it is most advantageous to use the membrana tympani of the domestic fowl.

Ear

If a portion of the tissue belonging to the outer ear is cut out with the membrana tympani, the plexus of the sympathetic nerve cells existing there can also be detected. Hence this procedure is recommended. For the method of silver impregnation it is better to use the membrana tympani and a portion of the outer ear as a whole, instead of cutting them into sections.

(3) Besides the kind of nerve cells in the membrana tympani, which it is claimed were successfully stained by Kessel in 1870, we recognise the existence of other nerve cells in the membrana tympani of the domestic fowl.

(4) As to the above fibres of the membrana tympani, they are distributed more or less in the same sphere as those stained with methylene blue by Kessel and other authorities, that is, the nerves in the membrana tympani enter the membrane chiefly through its periphery, and ramify into two or three branches, mostly at acute angles, thus reaching the central part of the membrane. Among them there are some which run at an angle of 180 degrees but, observed carefully, the angle of ramification is found in most cases to be acute. Their positions can roughly be classified, according to the strata in which they are found; as under a layer of epithelial cells; under the layer of endothelial cells; and the plexus in the layer of the lamina propria. The two former sometimes become united in the lamina propria. The pars flaccida abounds more in nerve fibres than the pars tensa.

(5) As to the nerve endings, they do not present leaflike or knotted forms as stated by some authors, but instead they assume the type of free ending or of pin-headed termination which is seen in the cornea.

(6) If an incision is made in the peripheral region of the membrana tympani, degenerative phenomena are seen in the terminal nerves corresponding to the incised nerves, the degree of these changes being proportionate with the lapse of time after the incision.

(7) In the course of the nerves in the membrana tympani, we find small collateral nerves such as those described in connection with the motor nerve. These collateral nerves seem to arise from the sympathetic nerve system which forms a plexus of nerve cells in the subcutaneous region of the outer ear. They seem to end, like the cerebral nerves, among the structureless cells or with pin-headed enlargements.

(8) There are two types of the nerve cells in the sympathetic nerve plexus which exists in the hypoderm of the outer ear, especially near the outer ring of the membrana tympani; namely, the stellate and oblong cells. They send their respective fibres into the membrana tympani, some of which seem to become the above stated collateral nerves. AUTHOR'S ABSTRACT.

Abstracts

NOSE AND ACCESSORY SINUSES.

Negative Exploratory Puncture of the Antrum and Highmoroscopy. M. SLOBODNIK (Berlin). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde,* Vol. xxx., Heft 3, p. 320.)

The writer recalls cases with various signs of chronic rhinitis, in which exploratory puncture of the antrum has proved negative, but in which endoscopy of the antrum has revealed pathological changes in that cavity. He refers to the instrument described by him in the *Zeitschrift für Laryngologie,* etc., Vol. xix. (1930), Part 5, p. 437, which is introduced through a trocar after the Lichtwitz manner. When the Röntgen picture and exploratory puncture are both negative and involvement of the antrum is suspected, endoscopy is a reliable method of examining the mucous lining of the antrum. Several cases are narrated in illustration. JAMES DUNDAS-GRANT.

LARYNX.

The Value of the Urochromogen Test in the Urine in Tuberculous Diseases of the Upper Airway. KENJI KIMURA. (*Zeit. f. O.R.L.,* Bd. xxxiv., p. 29.)

The importance of the urochromogen reaction of the urine in determining the prognosis in pulmonary tuberculosis led the author to investigate these reactions in 37 cases of tuberculosis of the upper airway. His results are summarised as follows:—

1. In pulmonary tuberculosis complicated by tuberculous disease of the upper airway, he frequently obtained the same positive urochromogen reaction as is obtained in the pulmonary condition alone.
2. The reaction is positive in an earlier stage of the condition than is the Diazo reaction. In laryngeal phthisis with a favourable prognosis the reaction is always negative; with a bad prognosis, positive.
3. In laryngeal phthisis the reaction is positive for three or four months before death.
4. The intensity of the reaction runs almost parallel with the spread. The ulcerating form of laryngeal phthisis gives a much stronger reaction than the infiltrating.
5. In the exudative forms with a falling number of red cells the reaction is most strong.
6. In the presence of a negative reaction, stimulating treatment properly applied gives a good result; when the reaction is positive the results of stimulating treatment are bad.

F. W. WATKYN-THOMAS.

Pharynx and Tonsil

PHARYNX AND TONSIL.

Mixed Tumours of the Soft Palate. L. HOLMGREN (Stockholm). (*Acta Oto-Laryngologica*, Vol. xvi., fasc. 2-3.)

The characteristic trait of mixed tumours is their multiplicity. Their common seat is in the salivary glands—the parotid type being the most common, but they may occur in other parts of the bucco-facial area and in the palatine region.

The most recent cases of these tumours occurring in the soft palate were published by Sonnenschein in February 1930 and he gave a review of the literature.

These tumours are believed to occur equally in the two sexes and at any age. They may show but little change in growth for some years, but once becoming active grow more or less rapidly. They may undergo a malignant type of degeneration, then increasing rapidly in size, infiltrating neighbouring tissues and spreading along lymph channels, or in the final stage by the blood stream. This may occur by a perforation of the capsule of the tumour and may follow incomplete surgical removal. A contra-indication to surgical removal is adherence to the great vessels of the neck, when X-ray treatment must suffice.

The writer proceeds to discuss the views concerning their origin, and then describes in detail three cases successfully operated upon without difficulty. One of the cases was under observation up to seven years without any recurrence.

These tumours are clinically benign and show a favourable prognosis if treated by operation at a sufficiently early stage.

H. V. FORSTER.

Inflammation of the Achilles Tendon in Acute Tonsillitis. G. V. TH. BORRIES. (*Zent. f. Hals.*, 1932, Bd. xviii., p. 19.)

This complication was first described by von Eicken who reported inflammation of the Achilles tendon on both sides more than eight days after the first appearance of the acute tonsillitis. Borries reports two cases.

In one case pain in the wrist and in both Achilles tendons appeared in September during the tonsillitis; tenderness was still present in November, fourteen days after tonsillectomy.

In the other case, the patient, a doctor, first noticed pain in the tendons twelve days after the onset of the tonsillitis. Heat and rest improved the condition but a week later the pain came back again. In both cases the cause of the condition seems to have been undue exertion too soon after the subsidence of fever. In the second case

the exertion seems to have been mounting stairs. The condition should probably be regarded as a rheumatic complication of tonsillitis. F. W. WATKYN-THOMAS.

ŒSOPHAGUS AND BRONCHOSCOPY.

The Relation of the Œsophagus to Senile Kyphosis, especially in regard to the possibility of Œsophagoscopy. MARIA SVERAK (Wn. Neustadt). (*Zeitschrift für Hals, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 3, p. 301.)

The examination of a number of cases of curvature of senile and traumatic origin confirmed the view of Brünings that the first essential for œsophagoscopy was mobility of the cervical vertebrae sufficient to allow retroflexion of the head. The next condition was absence of adhesions between the œsophagus and the spinal column, allowing the œsophagus to remain straight while the spine was curved, comparable to the bowstring and the bow. The passage of the œsophagoscope is more difficult if there is kyphosis of the upper two-thirds of the thoracic spine. If this condition is combined with a lower compensating lordosis, œsophagoscopy becomes impossible. Moderate kyphosis offers little obstruction if the head can be bent well back. JAMES DUNDAS-GRANT.

MISCELLANEOUS.

Unilateral Coating of the Tongue as a sign of Trophic Disturbance. J. DAWIDOW. (*Arch. Ohr., u.s.w. Heilk.*, 1931, Band cxxx., pp. 157-172.)

A general discussion on the nature of trophic disturbances precedes the consideration of a special group of cases in which unilateral coating of the tongue was associated with lesions of the 5th cranial nerve.

The influence of the *nervous system* on the nutrition of tissues and organs is described under three headings: (*a*) motor nerves, (*b*) sensory nerves, and (*c*) sympathetic nerves. The influence of the *circulatory system* is so closely bound up with the control by the sympathetic nerves that it can hardly be separated from the nervous influence. Other factors regulating nutrition are the *ductless glands* (*e.g.* thyroid and skin tissues, pituitary and bones), and more recently a connection has been found between trophic disturbances and certain *vitamins*.

The coating of the tongue is due to the filiform papillae; when these are long and crowded the tongue surface appears to be white. After lesions of the 5th cranial nerve, either central or peripheral, the affected half of the tongue may become more coated. Seven such cases are described. Another observer has found unilateral coating

of the tongue after otitis media, with an intact trigeminus. This is attributed to an involvement of certain sympathetic fibres in the nervus intermedius which go to the tongue. A coloured illustration of a typical case of unilateral coating of the tongue associated with herpes of the 2nd branch of the trigeminal nerve appears in the article. J. A. KEEN.

REVIEWS OF BOOKS

Ophthalmo- und Oto-Neurologie. By Dr. E. A. SPIEGAL and Dr. IGNAZ SOMMER. Pp. 366. Vienna and Berlin: Julius Springer.

In this "Lehrbuch" we are taken over ground, much of which is already familiar, by two masters of their subjects; one of them, at any rate, an original experimenter in neurology. The first 200 pages are devoted to the eye and include a thoroughly up-to-date review of our knowledge of the sensory and motor paths and nuclei, in so far as these can have any reference to disorders of the eye. The clinical bearing of the anatomical details is ever in view, *e.g.*, in discussing quadrant hemianopia cases of suspected lesions confined to the corpus geniculatum externum are supported by reference to the experimental work of Brouwer. The difficulties of obtaining the hemianopic pupil reaction are well known. Sach's method is thus described:—

"A disc 25 cm. in diameter, covered with white paper on one side and having a 4 cm. central hole is held by the surgeon before his own eye. The patient seated 30 cm. away fixes this hole. The paper side of the disc reflects the day or lamp light into the patient's eye. A black half disc held by the surgeon vertically in his other hand can be quickly moved from side to side, and can thus be placed so as to cut off half of the patient's field, leaving the other half exposed to the reflected light."

One turns with some eagerness to the subject of retrobulbar neuritis but is a little disappointed with its very completeness. As Hazlitt said of Jeremy Bentham's philosophy: "it includes everything but includes everything alike . . . an inventory rather than a valuation." One looks in vain for a caution that ordinary retrobulbar neuritis is a disease with a strong, one might almost say an inveterate, tendency to cure itself. One would like more exact information on the assertion that "frequently in toxic neuritis is the cochlearis—and occasionally the vestibularis also—affected." This is amplified later thus:—"In the rhinogenic form (of retrobulbar neuritis) the ear-findings are mostly negative; while in the non-rhinogenic form they are frequently positive, in that the disease-producing toxin can also damage the aural nerves."