The Ear

Acute Frontal Sinus Suppuration. — J. D. LITHGOW, F.R.C.S. Ed.—Boy, aged 12, was treated by intranasal operation, which did not give sufficient drainage. Radical frontal operation done and free nasal drainage established. Cure.

Carcinoma of the Right Vocal Cord.—W. T. GARDINER, F.R.C.S. Ed.—Male, was shown at last Summer Meeting with a white fringy growth on the right vocal cord.* Portion removed and structure indefinite. Members' opinions were divided between keratosis of the larynx and carcinoma. Following the meeting a second portion was removed and pronounced definitely malignant.

Under rectal anæsthesia the ordinary laryngo-fissure was performed and the vocal cord removed.

Patient still shows an eroded area on the left cord which was obvious last year, but there is no extension of this. He is under observation.

Dr SYME said the other side of the larynx appeared suspicious, as if there was a condition continuous with what had been removed. He would employ suspension and remove a piece for examination.

Dr DAN MCKENZIE asked if it was better to do a laryngo-fissure or a complete excision of the larynx. Statistics showed that the operation mortality of excision of the larynx was 5 per cent. The operation mortality of laryngo-fissure in the best hands was rather over 6 per cent., and there was no doubt that the laryngectomy removed the cancer more thoroughly.

Dr J. S. FRASER asked if specialists really believed that the operation mortality after excision of the larynx was only 5 per cent. He doubted it.

Dr W. T. GARDINER stated that he had had the case under observation ever since operation, and was of the opinion that the area in question was becoming smaller and certainly showed no signs of malignancy.

ABSTRACTS

THE EAR.

Three Cases of Primary Mastoiditis. BRUNO RICCI. (*Arch. Ital. di Otol.*, October 1925, vol. xxvi., fasc. x., p. 638.)

The author has consulted the literature dealing with a large number of cases of primary mastoiditis, but on analysis many of these had to be reclassified as pseudo-mastoiditis, having followed a transient otitis media sometime before. The three original cases of the author were apparently primary, as in none had there been any history of previous nasopharyngeal catarrh nor any earache nor diminution of hearing.

The first case was that of a woman of 42, with an old luetic history

* *Journal of Laryngology and Otology*, September 1925, vol. xl., p. 605.

who had severe headache and a painful swelling behind the right ear with normal tympanum and hearing. The swelling was at first thought to be a gumma and antisyphilitic treatment was commenced. However, a week later the condition was worse, so that operation was decided upon. The whole mastoid was broken down and full of pus. The sinus was exposed and covered with granulations. The wound healed normally.

The second case followed an attack of influenza without any nasal or pharyngeal symptoms. The third had no apparent cause, but began merely as a painful spot behind the mastoid which lasted three months before the patient came for treatment. There had been persistent nocturnal headache. When seen, there was a painful and œdematous spot behind the mastoid with a normal area between it and the pinna.

J. K. M. DICKIE.

A Case of Otogenic Sepsis. HANS MALTEN. (*Münch. Med. Wochenschrift*, No. 43, year 72, p. 1842.)

The patient, an otherwise healthy man of about 37 years, had experienced several attacks of severe arthritis for which no satisfactory explanation was forthcoming. He sought the writer's aid for an unusually severe attack which was accompanied by swelling of the feet and right hand, and a swelling on the left half of the sternum. In spite of the fact that the tuberculin reaction was negative, the case was considered to be one of tuberculosis until a cultural examination of the aspirated fluid gave a pure culture of *streptococcus mitis*. When, *inter alia*, the ears were subsequently examined, a chronic middle-ear suppuration was discovered upon the right side with cholesteatoma formation. Cultural examination revealed an almost pure growth of the above-mentioned streptococcus.

As the patient was unaware of the existence of this affection it must be assumed that it had originated during an attack of scarlet fever which he had had in his childhood. The writer, an internist, now makes a systematic examination of the ears of every new patient and emphasises the importance of such examination in all doubtful cases of focal infection.

J. B. HORGAN.

Sensory Aphasia Due to Otogenous Extradural Abscess in the Left Middle Fossa. E. BÜCH, Essen. (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Bd. xiii., No. 3, p. 351.)

The sensorium was slightly sluggish and there was amnesic aphasia and paraphasia. Extradural pus was found with marked fetor; exploration revealed no abscess in the brain and on the following day there was great improvement.

JAMES DUNDAS-GRANT.

The Ear

Protracted Serous Meningitis following Ear Suppuration. A. BLUMENTHAL, Berlin. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, February 1926, pp. 157-69, with 16 references.)

When symptoms of meningitis persist for some time after the removal of the primary focus, *e.g.* a mastoid or extradural abscess, and yet the cerebrospinal fluid remains free from organisms, we have an interesting clinical entity which is dealt with at some length in this article.

In the treatment of this condition it is essential to do repeated lumbar punctures, daily if necessary; incisions of the dura mater are best avoided, at any rate at the first operation. The meningeal symptoms may persist up to six weeks after the mastoid condition has been effectively dealt with. The patients usually recover if the cerebro-spinal fluid remains free from organisms.

Pathologically the symptoms are probably due to an œdema of the meninges, which has arisen as the result of irritation from the mastoid or extradural focus; this condition has also been called "collateral" meningitis. J. KEEN.

Frontal Lobe Abscess following Otogenic Sinus Thrombosis. R. BLEYL, Nordhausen. (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xiii., Heft No. 1, p. 16.)

The author quotes the experience of various observers and includes the case of an abscess of the right frontal lobe resulting from suppuration in the left middle ear; he adds a case of his own. He indicates three sources by which thrombosis may lead to cerebral abscess, (1) direct infection from disease of the cerebral sinus wall; (2) by embolic metastases from the entrance of infectious material into the blood stream passing first through the pulmonary circulation; (3) by retrograde transport of infectious material from the sinus into the veins of the meninges.

In the author's case the last appears to have been the route, the infection passing from the sinus through the great anastomotic vein of Trolard. The patient developed the symptoms of encephalic abscess, but exploration of the cerebellum was negative. There followed sensory disturbance of the left arm (the primary disease was in the right middle ear), then motor weakness in the left arm and to a lesser degree in the left leg. Exploration of the right temporo-sphenoidal lobe was, therefore, carried out, but no pus was found. On *post-mortem* examination there was revealed in the upper pole of the right frontal lobe an abscess 3 to 4 cm. deep, about 6 cm. in height and 10 cm. in breadth, surrounded by softened brain substance without a definite capsule. From the site of the abscess a much dilated thrombosed vein

led to the Sylvian fissure. The author concludes by stating that such abscesses, originating through the pial veins, occur in the cortex, while metastatic abscesses form in the medullary substance.

JAMES DUNDAS-GRANT.

Leptomeningitis complicating Acute Otitis Media. CORRADO FERRETTI. (*Arch. Ital. di Otol.*, October 1925, vol. xxxvi., p. 628.)

The author discusses treatment and reports a case of leptomeningitis following an acute otitis media in which labyrinthine symptoms appeared seven days from the onset, followed two days later by definite symptoms of meningitis. Turbid fluid issued on lumbar puncture. At the operation, for purpose of better drainage, there was a fairly extensive removal of diseased tissue along with the ossicles and the drumhead. The wound was left open. Examination of the pus from the cerebro-spinal fluid showed mainly mononuclear leucoytes, but no organisms. In the pus from the mastoid capsulated diplococci and *Diplococcus catarrhalis* were found. Daily lumbar puncture was carried out with withdrawal of large quantities of cerebro-spinal fluid. Intramuscular injections of autovaccine were used. The patient gradually improved and was cured in about six weeks.

The various methods of treatment are discussed. Practically everyone agrees that the primary focus in the mastoid must be very thoroughly removed, but opinions differ as to the advisability of drainage through the labyrinth or by free incision of the dura mater.

The author is of the opinion that free incision of the dura mater is the most rational procedure in cases of chronic otitis media where the process is fairly well localised; in acute cases where there is a rapid diffuse spread probably through lymphatic channels the dura mater should not be opened as that only leads to fresh infection. Repeated punctures give relief to the pressure and at the same time cause the production of new cerebro-spinal fluid richer in antibodies and containing fewer toxic products. This allows the cerebral circulation to go on.

J. K. M. DICKIE.

THE NOSE AND ACCESSORY SINUSES

Tuberculosis of the Middle Meatus. W. TONNDORF, Göttingen. (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Bd. xiii., Heft No. 3, p. 466.)

A growth arising in the middle meatus extended backwards into the nasopharynx; it presented the characters of a fibroma. When removed it was found to have a marginal zone containing innumerable tubercles with giant cells in quantity and had in part undergone caseous degenera-

tion. The patient was a healthy-looking woman who had suffered from ozaena. Tonndorf insists on the necessity of removing a large portion for microscopical examination, as such tumours are easily mistaken for malignant growths and extensive operations may be carried out in error. JAMES DUNDAS-GRANT.

An Operation for the Removal of the Sphenopalatine Ganglion. EDWARD CECIL SEWALL, San Francisco. (*Annals of Otology, Rhinology, and Laryngology*, March 1926.)

The operation so far has only been done on the cadaver. The route to the ganglion is through the posterior wall of the maxillary antrum, having opened up this cavity as for an ordinary radical antrum operation.

The anatomy of the parts is gone into fully and the illustrations at the end show the steps of the operation. Each step is given in detail and the whole operation is performed under local anæsthesia. One of the author's colleagues has made use of this approach in operating on a tumour in the pterygopalatine fossa.

The author presents the operation for consideration, believing that the newer methods of local anæsthesia have brought this region into the surgical field with much hope of ultimate success.

NICOL RANKIN.

An Unusual Ethmoidal Finding. S. R. SKILLERN, Jr., Philadelphia. (*Annals of Otology, Rhinology, and Laryngology*, March 1926.)

In this paper we have a report on what Dr Skillern rightly thinks a very unusual and unique case in medical history. The patient presented the usual features and symptoms of sinusitis. He suddenly developed ptosis of the right eye without any œdema, tenderness or swelling, and was sent to an eye hospital. Diagnosis: "ptosis of the right eye, of syphilitic origin; a 4 + Wassermann; probable sinusitis." The patient then came under the care of Dr Skillern, in whose clinic the Wassermann was reported as negative. Operation was performed on the right ethmoidal and sphenoidal sinuses. The ptosis cleared up entirely, the headaches disappeared and the nasal discharge was greatly diminished. The patient was discharged well. No anti-specific treatment was started until the ptosis had actually begun to improve.

The point of unusual interest in the case is that during the operation a sound, passed gently into the nose (presumably through the right sphenoidal ostium), went on without any resistance to the depth of $7\frac{1}{2}$ in. The patient was X-rayed and it was found "that the lateral view showed the probe extending upwards from the nasal cavity, above the sphenoidal sinus, apparently through the brain substance to

within $2\frac{1}{2}$ cm. of the inner table of the skull at the vertex. In a frontal view the probe was seen to be in the mid-line of the skull, probably in the median fissure." The pictures are shown. It is thought that the probe must have gone through a dehiscence in the posterior ethmoid capsule or through an unusually large posterior ethmoidal foramen. As noted above, the patient went home well. Within three weeks he died of "cavernous hæmangioma of the right cerebral hemisphere, hæmorrhage into the right cerebral hemisphere, the entire ventricular system and the subarachnoid and subdural spaces." At the *post-mortem* attempts were made to pass the probe, without success. A minute examination of the dura mater failed to show any sign of perforation or injury. No opening was found in the underlying bone, from cribriform to sella turcica excepting the posterior ethmoidal foramen. No evidence of recent or old meningitis was found.

Apart from the above interest in the case, Skillern reports it in order to lay stress on the fact that all cases of ptosis must not be diagnosed as syphilitic until a thorough intranasal examination has been made. It is the author's belief that the ptosis is due to toxins extending through the lamina papyracea and paralysing the muscles themselves or the nerve terminals in or in close proximity to the muscles.

NICOL RANKIN.

Brain Abscess of Paranasal Sinus Origin. GORDON BERRY. (*Laryngoscope*, Vol. xxxiv., No. 5, p. 346.)

Two interesting cases of abscess of the brain are recorded:—

Case I.—A strong, vigorous male aged 44, was admitted to hospital in a semi-comatose condition. For two weeks he had suffered severe headaches accompanied by blurred and double vision. During the next three days he had several spastic convulsions and he gave a history of sunstroke seven years ago and a gradual failing of hearing in the left ear a little later, while working as a boilermaker. His symptoms were: severe parietal headache more marked on the left side, a choked disc and retinal hæmorrhages on the left, blurred vision, greater spasticity of left side during convulsions, tactile partial anæsthesia of the left nasal mucous membrane and of the left cheek. The tongue pointed a little to the right. The left cochlea and labyrinth were dead, while the right side was normal. There was outward "past-pointing" to the left.

A diagnosis of abscess in the middle fossa, near the optic chiasma on the left side, was made. Every now and then, some thick, foul pus was coughed up, very often in the mornings. The left middle turbinate was removed and the posterior ethmoidal and sphenoidal sinuses were freely entered and exposed. No disease was noted, the sphenoid appearing healthy. There was some improvement in the symptoms, but he continued to cough up pus. On the eighth day, as a result of

increased pressure symptoms, a low left-sided decompression operation was done, and the brain explored; repeated tapping of the frontal and temporo-sphenoidal lobes failed to reach pus. Injections of air, two days later, into the left lateral ventricle showed all the air in the right lateral ventricle, while the left ventricle was collapsed. He died, seven weeks after admission, of meningitis.

At the autopsy, a large abscess of the left temporo-sphenoidal lobe below the lateral ventricle was found. It had ruptured into the ventricle. The anterior internal part of the abscess reached the pituitary fossa, and in the floor of this was found a necrotic opening directly into the left sphenoidal sinus. This explains the escape of pus in the mornings, which the patient coughed up. The disease started in the sphenoid, but this cleared up and remained so.

Case II.—Female aged 22, admitted in a partial stupor and mentally unresponsive, with a history of acute left ethmoidal and frontal sinusitis five weeks previously. Ten days before admission, she suffered a severe epileptiform convulsion, followed by headache, nausea, vomiting, and slow pulse. There was a left-sided exophthalmos, a suggestion of left optic neuritis, and paralysis of the left external rectus. A bony sequestrum, apparently the posterior half of the middle turbinate, was removed from the left ethmoidal region. Three days later, the left ethmoid, frontal sinus and sphenoid were opened. Three weeks later, an attempt was made to punch away granulations on the roof of the left ethmoid. This proved to be a brain abscess projecting through an opening in the posterior ethmoidal roof; a gush of at least two teaspoonsful of pus occurred. An X-ray showed the abscess cavity filled with air, a large oval area with clearly defined edges in the left frontal lobe.

She improved, and after four months in hospital she was allowed to return home. Immediately on arriving home, she had numerous convulsions, vomited frequently and was semi-conscious. On the following day there were thirty-five more convulsions; lumbar puncture relieved her. The white corpuscles numbered 31,500. She improved again and was allowed to return home. In a month, she was readmitted with another series of convulsions which ceased under bromides.

For nine months she was free, and again she had about thirty-five seizures. For three years she was free of these seizures and she was employed as a stenographer and bookkeeper.

Finally, after a little initial deafness, she had a violent left frontal headache and vomiting; two days later the neck was stiff, meningitis was well advanced, and she died in sixteen days.

The autopsy showed a large oval abscess in the left frontal lobe with a rupture at its base. The strong neurotic element, with a history of insanity in the family, rather complicated the diagnosis and, later on, the treatment.

ANDREW CAMPBELL.

Abstracts

ENDOSCOPY.

Endoscopy of the Lower Air Passages and Upper Food Tracts in Diagnosis. WILLIAM HILL. (*Practitioner*, February 1926.)

During the past fifteen years endoscopy has gradually been adopted as a routine measure in diagnosis and treatment in the areas included in the heading to the article. Although the larynx can usually be more easily and efficiently examined by reflected light there are cases where subglottic lesions can be more thoroughly investigated by endoscopic tubes, and treatment of all laryngeal conditions is more easily carried out in this manner. In the lower pharynx, post-cricoid lesions are comparatively seldom demonstrable by means of the laryngeal mirror, and a short endoscopic tube with either distal or proximal lighting is a necessity for accurate diagnosis. Foreign bodies, benign neoplasms, malignant ulcers, or the opening of a pouch may thus be detected. Œsophagoscopy is the only accurate means of diagnosing conditions in the gullet. X-rays with a thick opaque meal are useful but cannot take the place of direct vision. The author prefers tubes as wide as can be borne, 18 or 20 mm. In this country general anæsthesia is usually employed. In this way the examination can be made more leisurely and if necessary treatment can be proceeded with. Tracheoscopy and bronchoscopy are also becoming more and more extensively used for diagnostic and therapeutic purposes, but skill and rapidity of work are here most important: prolonged manipulations have often led to fatal complications. Some foreign bodies are very easily removed, while others may prove intractable to the most skilful operator. A bronchiectatic cavity may be localised and topically treated and its stenosed entrance dilated. Killian laid it down that in children under 4 years of age, the danger of laryngeal œdema made it advisable to pass the bronchoscope through a tracheotomy opening, but the author has removed a foreign body from the secondary bronchus of an infant of thirteen months "per vias naturales," without subsequent trouble.

T. RITCHIE RODGER.

Asymmetry of the Mouth of the Œsophagus and Retropharyngeal Diverticula. H. P. MOSHER. (*Laryngoscope*, Vol. xxxiv. No. II., p. 854.)

The author states that œsophageal pouches have long been held to be herniæ of the mucous membrane through the anatomically weak spot on the posterior wall of the œsophagus. No reason for the commencement of such a hernia has been explained. Asymmetry of the pharynx due to asymmetry of the larynx, the pyriform sinuses or the mouth of the œsophagus itself is suggested as such a cause.

Webs may be found on any part of the posterior surface of the

cricoid cartilage, or they may be found in the pyriform sinuses. The pyriform sinuses may be narrowed transversely or antero-posteriorly. There is frequently a difference in the two halves of the thyroid cartilage. In two cases in which there was asymmetry of the right half of the thyroid cartilage, the right side of the cricoid cartilage was glued by adhesions to the posterior wall of the œsophagus. The mouth was in each case on the left side of the hypopharynx. The obliteration of the mouth of the œsophagus occurs on the same side as the asymmetry of the thyroid cartilage. The writer was successful in making an artificial pouch on the cadaver. The mucous membrane of the œsophagus is easily evaginated through the circular fibres of the œsophagus in the weak triangle by pressure of the finger-tip. If the thickened lower edge of the inferior constrictor is pushed upward, the pouch is easily made larger. The lower edge of the constrictor acts as a constricting band. The drag of the pouch closes the œsophageal opening to a small central lumen or a short transverse slit. On reducing the artificial pouch, the œsophageal opening resumes its natural shape. This explains why resection of the pouch in the living restores the lumen of the œsophagus.

This theory was tested on a patient who had a pouch, and it was found that the opening of the œsophagus was on the left side, while the right half was obliterated, and the author claims that this completes the chain of proof which he has built up. There was no difficulty in finding the opening of the œsophagus.

Asymmetry of the thyroid cartilage, the pyriform sinuses and the mouth of the œsophagus is common. Post-cricoid webs turning one or both pyriform sinuses into pockets are also common. A deformity of this kind, or one of the mouth of the œsophagus throws the muscle strain in swallowing off the centre. A hernia of the mucous membrane does not necessarily occur through the weak area below the inferior constrictor, but may occur through the lower part of the muscle itself.

The article is well illustrated. ANDREW CAMPBELL.

Cardiospasm or Achalasia of the Œsophagus. F. HOLT DIGGLE. (*Practitioner*, April 1926.)

Achalasia is characterised by an obstruction, during life, situated at the lower end of the œsophagus, with hypertrophy of the œsophageal wall above, but without any apparent cause as seen after death. Hanny described the condition first in 1833, and regarded it as an idiopathic dilatation of the œsophagus since no organic lesion could be found. Mikulicz in 1882 ascribed the obstruction to simple spasm at the cardiac orifice. Morell Mackenzie attributed it to "diminished contractile power or general weakness of the œsophageal musculature," but this does not explain the hypertrophy above the obstruction. Rolleston

suggested "a failure in the co-ordinating mechanism by which the cardiac sphincter is relaxed during swallowing," and that "paralysis or continual inhibition of the longitudinal muscular fibres of the œsophagus would allow dilatation of the tube to occur, and at the same time, by interfering with the opening of the cardiac sphincter would induce hypertrophy of the circular muscular coat." Hurst agreed with Rolleston. Brown Kelly, however, maintains that definite spasm at the lower end, with hypertrophy of the cardiac sphincter, has been seen after death and that all the endoscopic appearances are in favour of spasm. He considered "that the spasm is predisposed to by a state of irritability of the muscle fibres or of the nerves mechanically controlling them in the wall of the œsophagus above the hiatus." In the majority of cases the obstruction is so slight as to be overcome readily by pressure, but in others this is impossible as in one case quoted. The author has found achalasia associated with duodenal ulcer. Morley and Jefferson are also quoted as having noted a similar connection between cardiospasm and duodenal ulcer. The symptoms and X-ray appearances are described. Treatment consists in frequent dilatation by a water-filled bag or by a mercury-filled bougie.

T. Ritchie Rodger.

OTO-LARYNGOLOGY IN VIENNA, 1926.

(*Contributed*)

In the month of May the visiting Association of Throat and Ear Surgeons of Great Britain paid a visit to Vienna. The members were greatly indebted to Professors Hajek and Neumann and the other ear and throat surgeons who contributed so successfully to the scientific programme.

A visit was paid to Professor Hajek's clinic, where a large number of operation cases were shown in the wards.

The Nose and Accessory Sinuses.—A case of epithelioma of the tip of the nose was exhibited; this was to be treated by excision. Also an interesting case of melanotic sarcoma of the nose was shown, which had been treated by radium. A very rare case of angiofibroma cavernosa of the superior maxilla was seen. After ligature of the external carotid, the growth was excised under local anæsthesia.

A patient with Paget's disease of the maxillæ was demonstrated, in whom carcinoma had developed in the inferior turbinates.

A case of malignant disease of the nose and upper jaw, cured by big doses of radium after excision, provided an excellent opportunity of demonstrating the mechanism of the soft palate during swallowing, as the nasopharynx could be readily seen from the front. When the patient swallowed, it was noticed that the soft palate rose up like a hump and the palato-pharyngeus on either side approximated each other to shut off the nasopharynx.

The most interesting was a nasopharyngeal tumour invading the base of