foreign bodies, one of which, the size of a bean, was now exhibited. She complained of pain behind the sternum in the region of the bifurcation of the trachea, towards the right side. On examination paralysis of the right recurrent nerve was noted, but this was considered most probably the result of a thyroidectomy three years ago.

Bronchoscopy revealed a foreign body lying in the entrance to the right upper lobe, which previous X-ray examination had failed to show. The foreign body was irregular, had a central cavity, and consisted of calcareous matter.

ABSTRACTS

THE EAR.

Lavage as the only Method of Dressing after Mastoidectomy. G. LAURENS, C. HUBERT and L. GIRARD. (*Ann. des Mal. de l'Oreille, etc.*, September 1928.)

The operative success of a mastoidectomy depends on two factors: complete intervention and proper dressings. The first condition is now realised, but there is not the same complete agreement regarding the question of dressings.

The writers review the different methods employed in the after-treatment of partial and complete mastoidectomies, and then describe their own, which consists of a systematic and exclusive use of lavage after the removal of the preliminary packing of gauze necessary to fix the plastic meatal flaps in good position. This takes place from the time of the first dressing, on the third day after operation, and a 30 to 40 per cent. Dakin's solution is used twice or three times daily.

They claim an excellent operative result with a well-cicatrised cavity, but especially emphasise the great facility, simplicity and painlessness. L. GRAHAM BROWN.

Vegetative Tuberculosis of the Mastoid. J. DURAND and D. STEMBERG. (*Ann. des Mal. de l'Oreille, etc.*, September 1928.)

It is agreed that tuberculous disease of the mastoid is generally the result of a propagation from the tympanum, which shows the usual characteristic lesions. The following types have been described:—

(1) A latent form due to progressive infiltration.
(2) A rarefying and perforating form, the ulcerative type.
(3) A necrosing form with sequestrum, revealed sometimes by a facial paralysis.
(4) A form with hyperostosis, the infiltration taking place under a thick layer of compact bone.

Moreover, the primary form, where the infection travels via the blood stream and suddenly appears in the mastoid, has also been described.

The writers, however, suggest that the above types do not cover all clinical appearances of the disease and cite an observation of their own from which they conclude that there is also a vegetative type of tuberculous mastoiditis, in which the clinical considerations suggest that it is primary in nature, resembling a neoplasm in physical signs rather than a perforative mastoiditis. L. GRAHAM BROWN.

Technique of the Mastoid Operation in the Infant. P. PANNETON. (*Ann. des Mal. de l'Oreille, etc.*, November 1928.)

The writer, who has operated on more than two hundred cases of latent mastoiditis during an epidemic of diphtheria at Montreal in infants below the age of 18 months, has developed a special technique for which he claims the following advantages in contrast to the older classical Schwartze method or its modifications:—

(*a*) Entire suppression of general anæsthesia. Local analgesia is brought about by the injection of 1 to 1.5 c.c. of novocain adrenalin solution.

(*b*) Reduction of the length of incision to 1 cm.

(*c*) Reduction of the time of operation. This varies between 14 seconds and 2 minutes, including dressings.

(*d*) Absence of operation shock.

Thus opening of the mastoid of an infant becomes a minor operation.

After a full description of the anatomical considerations to be observed in the infant as compared to the adult he explains in detail his technique for producing local analgesia, making his small incision for the most direct and safe approach to the antrum and its curettage, and finally the application of a simple and suitable dressing.

L. GRAHAM BROWN.

Ambrine in the Dressing of Mastoid Patients. J. DAVID-GALATZ and ST. GHEORGHIN. (*Ann. des Mal. de l'Oreille, etc.*, December 1928.)

The principle of the method is that already indicated by Daure and Liébault. The writers, however, have gone further and employed ambrine in every case of radical mastoidectomy with or without complications, whatever the age of the patient, and even when the dura mater has been exposed. A cavity free from all bony infection and thoroughly cleansed are the only essentials.

Commercial ambrine, previously sterilised, is poured into the cavity

via the meatus at the first dressing, *i.e.* on the third or fourth day, and left *in situ* for ten days. After the tenth day it is removed, and then the cavity, already granulating uniformly, is washed with Dakin's solution, dried, and filled with sterilised boric powder. The latter is removed and reintroduced as often as necessary.

The result claimed is a cavity properly epithelialised with a minimum of suffering and manipulation. L. GRAHAM BROWN.

Pneumococcus Types in Acute Mastoiditis and "Primary" Pneumococcus Meningitis: Preliminary Report. JOHN T. BAUER, M.D., and HUSTON ST CLAIR, M.D., Philadelphia. (*Journ. Amer. Med. Assoc.*, 5th May 1928, Vol. xc., No. 18.)

During the past four years the authors have studied the types of pneumococcus in a series of eighteen cases of pneumococcal mastoiditis and meningitis in which the lungs were negative. The series is divided into two groups, those with and those without otitis media. The organisms were obtained in cases of mastoiditis from the wound and spinal fluid, and in cases of meningitis at post-mortem. Three tables are given showing the results.

In the eighteen cases of "primary" pneumococcal infection of the mastoid cells and meninges in which the organisms have been typed, type III. pneumococcus predominates in the cases following otitis media, and type IV. pneumococcus in meningitis without a history of otitis media. ANGUS A. CAMPBELL.

Experiences of Primary Skin-grafting in Radical Mastoid Operations. J. TEMKIN (Moscow). *Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 467.)

The writer is whole-heartedly in favour of the grafting being carried out at the time of the radical operation. The result of the grafting depends mainly on the character of the granulating surface on which the graft is placed and as it is at its smoothest at the end of the operation this is the most favourable time for it to be effected.

JAMES DUNDAS-GRANT.

Evidence of Vaso-constrictor Processes in the Internal Auditory Artery during Caloric Stimulation of the Labyrinth. O. MUCK (Essen). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 443.)

Muck's "adrenalin-probe" phenomenon is the formation of a white streak on the red patch on the nasal mucous membrane produced when, after spraying with adrenalin, the paled surface is stroked with a probe. The red patch is normal; the white streak indicates vaso-motor hyperactivity. Muck has found this white streak producible

while the caloric test is carried out (if the labyrinth is excitable) and he takes this to indicate that Kobrak's view that the caloric disturbances are vaso-motor in nature is correct. (*Vide* Abstract, *Journ. of Laryng.*, Vol. xli., p. 550.) JAMES DUNDAS-GRANT.

Isolated Fracture of the Cochlea in Fractures of the Base of the Skull. ARNOLD KLINGENBERG (Zürich). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 452.)

The various classifications of fractures of the base of the skull according to the parts involved are stated, with illustrative cases from the literature on the subject. It is to be noted that longitudinal fractures of the petrous bone are transverse fractures of the base and *vice versa*. Two cases are narrated of fracture of the petrous bone involving the cochlea and sparing the rest of the labyrinth, confirmed by X-ray photographs. There is complete deafness with preservation of the vestibular reactions. If after an injury to the skull there is unilateral deafness with complete or partial preservation of the caloric vestibular reflexes, we can, in the absence of bleeding from the ear or injury of the middle ear, supported by a positive X-ray result, diagnose with certainty an isolated fracture of the cochlea. The functional disturbances alone might arise from a tear of the cochlear nerve which would be attended with less danger to life. The Röntgen photographs are taken by Stenger's method. JAMES DUNDAS-GRANT.

Concerning Paralysis of the Abductor of the Eye during the course of Otitis Media. A. A. BOONACKER and E. HUIZINGA (Gröningen). (*Acta Oto Laryngologica*, Vol. xiii., Fasc. 1.)

In Vol. xi. (p. 145) of the *Acta Oto Laryngologica* there appeared an article by Baldenweck and de Prades on Gradenigo's Syndrome. One could not do better than point out the detailed work of Vogel to the reader desirous of refreshing himself on this subject. Vogel concluded that the cause was a serous meningitis; Baldenweck and de Prades on the contrary favour the idea of Gradenigo—that the apex of the petrous is affected, and believe that they have demonstrated this by radiographs.

The writers believe that in a large number of patients in whom paralysis comes on during an acute middle-ear suppuration accompanied by pains in the temporal region, or in the homolateral eye, that a different factor is in operation. A series of cases, seven in number, is described, and the indication for or against operation is discussed.

In the new manual of Denker and Kahler (*e.g.* Tome VII., p. 167), Stenger always considers abductor eye paralysis a serious symptom, and advises prophylactic mastoid operation. On the contrary (p. 585), Hegener counsels one to wait quietly and not to operate unless it is indicated for other reasons.

The first case described was typical, as described by Gradenigo, mastoiditis was present. This case occurred abroad and recovered without operation. In two cases there was only a simple catarrhal otitis media; two other cases showed definite indications for mastoid operation, which was done; two cases were operated upon solely because of the paralysis, and would probably have done well if left alone. One case had maxillary sinus suppuration as well as acute middle-ear inflammation, and six of the cases occurred in the early Spring. The writers call attention to the frequency of an influenza-like attack in their series of cases.

The writers believe influenza to be a potent factor in the cases shown, as a cause both of the ear inflammation and the paralysis. The paralysis itself is not a serious symptom, neither is it alone an indication for operation. The progress of the inflammatory process in the middle ear and mastoid is the guide for operative treatment.

H. V. FORSTER.

Some Considerations on the Pathogenesis of Ménières Disease. A. THORNVAL (Copenhagen.) (*Acta Oto Laryngologica*, Vol. xiii., Fasc. 1.)

Alexander once expressed the opinion that in Ménières well-known case the condition present was possibly one of leucæmic hæmorrhage of the labyrinth. If, however, one restricts oneself to clinical descriptions of so-called Ménières disease, it is possible to retain this name with less confusion.

Thornval proceeds to describe in detail a case of what he would call typical Ménières disease. The patient, a married man aged sixty-five, was attacked four years ago with noises in the left ear. Specialist treatment gave no relief; several months afterwards vertigo came on. The attacks were at first slight, lasting half an hour with intervals of several weeks. Then followed two years of freedom, but six weeks before consulting the writer the crises reappeared. Their character now was worse. Suddenly, without the least warning, there came over him the impression that he was about to fall into an abyss in front, and so he would throw his body backwards, falling on his back, on two or three occasions damaging the back of his head. When the attack had passed off, outside objects appeared to revolve round him. There was no vomiting. Such an attack would last four to five hours. There were only five such attacks altogether, but in the intervals he could remember slight attacks of several minutes' duration when it was not necessary to go to bed. Neither during nor after his attacks was there any change in the head noises.

On examination there was only slight depreciation of hearing on the left side. The lower tone limit was raised; the vestibular reactions

were little changed. The writer could recall a series of patients presenting symptoms of sufficient uniformity to form a typical picture. The symptoms fall under the headings of Auditive and Vestibular, and the writer discusses these in detail. Nystagmus seen during one of these attacks is even more violent than after unilateral labyrinth destruction.

In conclusion, he believes the condition to be a central not a peripheral affection, and thinks Ménières disease to be a functional disorder of the medullary nuclei. He likens it to migraine. It is twice as frequent in men as in women; men suffer from 40 to 60 years of age, women from 25 to 60.

Atypical cases are also discussed. These show some other ear affection, as suppurative ear disease, middle-ear disease, otosclerosis, or toxic conditions of the labyrinth or auditory nerve. Amongst cases, atypical in the form of their attacks, are those with a brief loss of consciousness due to shock from the severity of the onset, a symptom also seen in tumours of the pons and auditory nerve. Amongst other atypical examples are otolithic cases, also a variety with nystagmus and no auditory trouble, and finally, in nervous people, varieties without nystagmus and without vomiting.

To the example described in detail in this paper, Thornval suggests the title of Neuropathia Acoustica Susurrans. In brief, a variety characterised by head noises and passing auditory interference, recovery from the deafness and head noises being apparently complete.

H. V. FORSTER.

THE NOSE AND ACCESSORY SINUSES.

Rhinoscleroma. FREDERICK A. FIGI, M.D., and LUTHER THOMPSON, Ph.D. (Rochester, Minn.). (*Journ. Amer. Med. Assoc.*, 1st September 1928, Vol. xci., No. 9.)

Six cases are reported as having attended the Mayo clinic during the past ten years. The patients were all males and their ages varied from 26 to 35. Only one case was born on the American continent. Of the others, one was Russian, one Austrian, one Galician and two Rumanian.

The lesions involved the nose, mouth, pharynx, larynx and trachea. The diagnosis was made from biopsy and cultures from a bit of crushed tissue. All cases were treated by radium applied externally and in direct contact with the diseased tissue. The applications were repeated at intervals of four to six weeks. The galvanic cautery was also used in destroying localised indolent nodules in the pharynx. The lesions in the nose and pharynx responded to treatment much better than those in the larynx or trachea.

One patient is free from symptoms for five years and two others for

one year, although one of these required an emergency tracheotomy tube and is still wearing it. One other died and two were lost sight of. An extensive report is made of the bacteriological data.

The article is freely illustrated and contains an extensive bibliography. ANGUS A. CAMPBELL.

Histopathological examination of the Spheno-palatine Ganglion with special reference to Atrophic Rhinitis. KLAUS VOGEL (Berlin). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 507.)

The sudden death of a young woman suffering from ozæna allowed Dr Vogel to obtain the spheno-palatine ganglion for microscopical examination. He found well-marked connective tissue atrophy of this ganglion, while the Gasserian, the ciliary, the geniculate and the vagal-jugular were quite normal. The data are shown in 30 microscopic illustrations. The method of exposing and removing Meckel's ganglion by operation is described and illustrated. He considers that ozæna is not due to disease of the ganglion, but that the latter is secondary to the former. From the slightness of the effects of extirpation of the ganglion, the writer considers it probable that its functions can be carried on in a thorough way by other nerves such as, possibly, those forming the perivascular network. JAMES DUNDAS-GRANT.

A New Method of Treatment of Ozæna. F. FEDERICA. (*Ann. des Mal. de l'Oreille, etc.*, September 1928.)

The method consists in taking pieces of hypertrophied inferior turbinates from other patients who are free from tubercle and syphilis, and inserting these under the septal mucosa of the ozænic patient, opposite the diseased atrophic inferior turbinates.

In six females between the age of 20 and 30 years so treated the result has been excellent.

The writer thinks the success of the method is due to the peculiar physiological structure of the hypertrophied inferior turbinates used as grafts, the bone of which is nourished chiefly by imbibition, and whose mucosa produces eosinophiles which give rise to granulations in the atrophic ozænic tissue. L. GRAHAM BROWN.

THE PHARYNX.

The Surgical Anatomy of the Tonsil. DENNIS BROWNE, F.R.C.S. (*Journal of Anatomy*, Vol. lxiii., Part I., October 1928.)

This paper is based on dissections and on observations made during the operation of tonsillectomy by dissection.

The tonsil is not oval as usually described, but roughly triangular.

It has two main attachments to adjacent parts. A fibrous attachment or "suspensory ligament" binds the capsule of the tonsil to the base of the tongue where it blends with the muscle sheaths. The other attachment is muscular, and is the insertion of the decussating fibres of the palatoglossus and palatopharyngeus muscles into the lower third of the tonsillar capsule.

The author holds the view that the vascular supply to the tonsil is served by a single artery: the tonsillar branch of the facial. This artery enters a definite hilum from which the veins emerge. The hilum is always in the lower half of the buried surface, close to the tongue.

The author is convinced that any danger from hæmorrhage comes from a vein which runs down from the soft palate in the areolar tissue between the tonsil capsule and the muscular bed. Below, the vein pierces the superior constrictor near the hilum and enters the common facial vein.

The surgical application of these remarks are, firstly, that the suspensory ligament may be divided early in the operation, thus mobilising the tonsil without increasing the bleeding. Secondly, that the paratonsillar vein—if it should be divided—retracts into the upper angle of the wound, where it may be caught and ligated.

Useful diagrams accompany the text. MICHAEL VLASTO.

The Muscular Attachments of the Tonsil. ROBERT H. FOWLER, M.D., New York, and T. WINGATE TODD, F.R.C.S., Professor of Anatomy, Western Reserve University School of Medicine, Cleveland. (*Journ. Amer. Med. Assoc.*, 19th May 1928, Vol. xc., No. 20.)

In a seven column, well-illustrated article, the authors discuss the embryology and relations of the tonsil. They state that the tonsil, from its development, is really a tubular structure, of which "both supratonsillar and infratonsillar recesses are parts, isolated from each other by overgrowth of the lining of the posterior wall of the fossa to form the central lymphoid mass, which by its relatively great size and protrusion masks the tubular nature of the second pouch."

In the fully-developed tonsil the edge of the orifice is guarded, except near the posterior pillar, by folds known as plicæ. The "capsule" is a clinical expression not accepted by the anatomist, and is really a part of the pharyngeal fascia.

The superior constrictor muscle is not in immediate relation, the palatopharyngeus lies between it and the capsule, to which it is attached at the groove between the upper and lower pockets by a bundle of fibres. This muscular attachment they have called the tonsillopharyngeus muscle. If this muscular attachment is teased through, complete enucleation of the tonsil can be carried out easily and without injury to the underlying structures.

ANGUS A. CAMPBELL.

Abstracts

Efficacy of Tonsillectomy for the Removal of Focal Infection. PAUL S. RHOADS, M.D., and GEORGE F. DICK, M.D. (Chicago.) (*Journ. Amer. Med. Assoc.*, 20th Oct. 1928, Vol. xci., No. 16.)

The authors have seen several patients who were not improved by the original operation but derived striking benefit from the removal of infected "tonsil stumps." They also note that tonsils with a high bacterial content were more often a focus of infection than those of a low bacterial content. In this study an estimate of the danger of "tonsil stumps" is attempted. The bacterial count, microscopic appearance and systemic relations of a series of tonsils removed for the first time are compared with similar data on "tonsil stumps." The average count per gram was 5,693,000 in tonsils removed for the first time as compared with 7,341,000 in "tonsil stumps." In the "tonsil stumps" the outstanding change was fibrosis, and many showed the crypt orifices closed and the crypts themselves dilated by exudate and organisms. It was also found that in 73 per cent. of the cases tonsil operations had been incomplete.

To determine the relative pathogenicity of the micro-organisms studied series of rabbit inoculations were made.

The article contains two tables and has an extensive bibliography.

ANGUS A. CAMPBELL.

THE LARYNX

Model of the Larynx. Prof. TONNDORF (Göttingen). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 464.)

The model prepared from the actual dissected larynx is made on a greatly enlarged scale for demonstration in the lecture-hall, and also of life-size for practice with in laryngoscopy and instrumentation. They are made in the Biological Department of Physical Instrument Works at Göttingen. JAMES DUNDAS-GRANT.

Bilateral Glottidean Sulcus (*Citelli*). GEORG. KELEMEN (Buda-Pesth). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 5, p. 475.)

A linear furrow below the vocal cord is constant in the gorilla and is found in many human larynxes. The cord above the slit is softer than the lower boundary of the slit. In one case there was persistent hoarseness, but this disappeared during an attack of laryngitis when the furrow was smoothed out, returning again when the inflammation subsided. A special form of slit at the posterior extremity of the cord is referred to as having been described by Horne in connection with pachydermia of the vocal process. JAMES DUNDAS-GRANT.

The Larynx

Leeches as Foreign Bodies in the Upper Air Passages in Palestine. Dr SALZBERGER (Jerusalem). (*Laryngoscope*, Vol. xxxviii., No. 1, p. 27.)

Leeches reach the upper air passages usually with drinking water, or during inspiration while bathing. Once swallowed the leech generally reaches the stomach, where it can do no harm. Sometimes it finds an attachment on the way and distressing symptoms follow. The cardinal symptom is constant slight hæmorrhage from the nose, pharynx, nasopharynx, larynx and trachea. Serious anæmia may follow, even with fatal results.

The application of a 30 per cent. solution of cocaine paralyses the leech and then the patient is placed in a position to allow the leech to drop out. It is wise to guard against the possibility of the leech disappearing into the trachea during cocainisation.

The author describes four cases, the first complained of pain in the throat, cough and hæmorrhage. On examination a plum-blue coloured swelling was observed on the laryngeal surface of the epiglottis. It was diagnosed as a blood tumour and on removal was found to be a leech swelled with blood. The second case was similar to the first, while the third showed a longish purple tumour on the choanal side of the uvula. The fourth case presented hoarseness and stridor. A leech was seen in the glottis, its head and three-quarters of its body lay below the vocal cords, while the remainder rested on the vocal cords. It disappeared with inspiration and reappeared with expiration. Owing to danger of choking, extraction was attempted without cocaine, but was unsuccessful. The patient refused removal under general anæsthesia and succeeded in extruding the leech by keeping in her mouth some very fatty cheese. There is an ample bibliography. ANDREW CAMPBELL.

Heliotherapy and Artificial Light: Treatment of Tuberculous conditions and particularly Laryngeal Tuberculosis, OVE STRANDBERG, M.D., Medical Superintendent, Ear, Nose and Throat Department, Finsen Medical Light Institute, Copenhagen, Denmark. (*Journ. Amer. Med. Assoc.*, 19th May 1928, Vol. xc., No. 20.)

In an eight page article the author discusses the subject in great detail. He states that the sun is unquestionably the best of all sources of light. In large towns, however, sunlight is of little practical use on account of the dusty and smoky atmosphere which absorbs the chemical elements from the light. As these chemically active rays are the most important artificial light must be used.

Among the various sources are mentioned the carbon arc light, the mercury vapour light, the iron arc light, and the tungsten arc light; of these he thinks that the carbon arc light most nearly

approaches sunlight, and therefore is used in most forms of tuberculosis. It is necessary that the distribution of energy in each individual unit of the spectrum be as intensive as possible. At the Finsen Institute two types of lamps, a large and a small, are used, and are so constructed that they can carry an extremely powerful current. The carbon is especially selected to insure as quiet a burning as possible, without sooting or getting red-hot. The universal light bath treatment is used almost entirely, and since its introduction the percentages of cures in lupus vulgaris has risen considerably.

In the absence of lung complications, adults receive an initial carbon arc bath of 25 or 30 minutes' duration. With the mercury vapour lamps the duration must be 5 minutes or less, especially if the burner is new. After each light bath the patient receives a tepid shower; the treatment is repeated every other day. A more or less intense red colour is produced after each treatment until the skin becomes fully pigmented. No attention is paid to a rise of temperature up to 101° Fahrenheit. Contraindications are severe heart disease, arterio-sclerosis, and non-tuberculous nephritis. Patients who are seriously ill are given the small carbon lamp. The patients are in the reclining position and the treatments must not exceed 10 minutes. When the patients are able to stand it the duration of each treatment is increased to a maximum of two and a half hours every other day. Patients often lose weight at first, but this is rapidly regained. Laryngeal tuberculosis might be cured solely by light baths, but more rapid recovery takes place when these are combined with cautery and absolute silence. As a rule the treatment lasts from six to sixteen months. In tuberculous middle-ear disease and in lupus of the nose, mouth and throat, the baths are supplemented by electro-coagulation and surgery. The author objects to reflected sunlight in the larynx. 86·6 per cent. of cures were obtained in 435 patients with lupus in the nose and throat. Of 41 cases of tuberculous ears 32 were cured. In 203 cases of laryngeal tuberculosis, all of whom had lung disease, the larynx was cured in 113, while most of the others improved greatly; the best results were obtained in purely intrinsic disease. Pain and difficulty in swallowing disappeared in all cases.

ANGUS A. CAMPBELL.

ENDOSCOPY.

Bronchoscopy in Diseases of the Lung. SIDNEY YANKAUER (New York). (*Acta Oto Laryngologica*, Vol. xiii. Fasc. 1.)

This article comprises the Presidential Address at the Eleventh Annual Meeting of the American Bronchoscopic Society, Washington, D.C., on 30th April 1928.

Endoscopy

The number of patients admitted to the author's service at the Mount Sinai Hospital for so-called medical bronchoscopies, *i.e.* diagnosis or treatment of diseased conditions of the lungs, outnumbered the foreign body cases in the proportion of ten to one.

Bronchoscopic diagnosis, bronchoscopic symptomatology, and the bronchoscopic indications for thoracic surgery, have become established matters of routine. The removal of foreign bodies will in the future be considered as incidental to, and not the main purpose of, bronchoscopy. The last hundred cases are reviewed in this group, where history and radiograph were negative for foreign body, and in which bronchoscopy was performed as routine; five cases were found to have a foreign body in the bronchi. Among these are not included two cases in which a foreign body was discovered by radiography.

It is an established routine to practise bronchoscopy in every case as a preliminary to any extensive lung operation. Its importance in malignant disease of the lung is noted. Carcinoma of the lung is more readily recognised than sarcoma. Of all the patients who began to have symptoms of pulmonary suppuration after the age of forty, more than half were found to be suffering from a malignant growth. Sarcoma of the mediastinum is usually found behind the trachea, dermoid cysts usually occur in the anterior mediastinum.

There were two cases of benign tumours of the bronchial tree, one a hæmangioma and the other a papilloma. Both were successfully removed endoscopically. There were a considerable number of lung abscesses, some post-tonsillectomic, others of unknown origin, which were treated by suction and lavage—but it must not be forgotten some are of diabetic and some of luetic origin.

He calls attention to the importance of bronchoscopic pneumonia, because, as in post-tonsillectomic lung abscesses, the bronchi are occluded by plugs of viscid inspissated secretion; they yielded to a short series of endoscopic aspirations and lavage. If a pneumonia fails to show evidence of resolution one week after the crisis, bronchoscopic treatment is indicated. Hæmoptysis occurred in fifty-two of the cases under discussion (cases with tubercle bacilli in the sputum are excluded from the series). Hæmoptysis occurred in about 75 per cent. each of lung abscess, carcinoma and foreign body cases. In the absence of tubercle bacilli in the sputum he considers hæmoptysis an absolute indication for bronchoscopy. The internist naturally dreads a bronchoscopy in these sick people, but it is the endoscopist's duty to dispel his fear and convince him of the valuable data obtained by this means which cannot be discovered by any other methods of investigation. H. V. FORSTER.

Abstracts

On Sword-swallowing and Œsophagoscopy. Dr Eelco Huizinga (Gröningen). (*Archiv. für Ohren-, Nasen- und Kehlkopfheilkunde*, March 1929.)

Sword-swallowing was performed by acrobats in Athens 2000 years ago. Stevens, a Scottish doctor, examined the stomach of a sword-swallower through a hollow metal tube in 1771, but œsophagoscopy was not put upon a practical basis until sixty years ago. Thus the manner in which the feat is accomplished by a juggler at the present day is of peculiar interest, and Huizinga is able to give a detailed account and to discuss the matter from the point of view of the endoscopist. The illustrations, of which there are five, consist of photographs of the act of swallowing the sword, a skiagram of the weapon actually in the gullet, with the point in the stomach, and a skiagram of the performer's throat and vertebral column, with one from a normal person for comparison, lipiodol being used to bring out the details. W. O. Lodge.

Pericardial Œsophageal Fistula, following Foreign Body in the Œsophagus. Pneumopericardium: Autopsy Report. Dr Charles J. Impertori. (*Laryngoscope*, Vol. xxxviii., No. 4, p. 268.)

A female infant, aged 13 months, was admitted with a diagnosis of bronchopneumonia. The child had been ill for over a month and the general condition was bad. An X-ray showed an open safety-pin at the cardiac end of the œsophagus, bronchopneumonia, and pneumopericardium. Without anæsthetic a small œsophagoscope was passed and the pin extracted within five minutes. The point of the pin had penetrated the œsophageal wall to the spring and clamp. Attempts to dislodge the pin lower down so as to grasp the point were unsuccessful, but the pin was removed by the method suggested by Jackson, *i.e.* straightening the pin against the tube mouth with the keeper and keeper branch within the tube. If a lateral movement of the œsophagoscope is made away from the point of the pin further down into the tube the point will straighten out. Seven days later the patient died. Post-mortem showed a pericardial fistula, bronchopneumonia, left hydrothorax and chronic purulent pericarditis. The probe passed from the œsophagus into the pericardium near the entrance of the right vena cava. It is interesting that there was no history of a foreign body and that the mother of the child was greatly surprised. The author suggests a routine X-ray examination in children. Andrew Campbell.

Endoscopy

Case Report—Open Safety-Pin remaining Stationary in the Thoracic Œsophagus of a Baby after Fifty Miles' Rough Transportation. Dr F. T. HILL. (*Laryngoscope*, Vol. xxxviii., No. 3, p. 206.)

While the clothes of a little baby aged 15 months were being changed, a safety-pin dropped into its mouth and disappeared. An X-ray showed the pin in the œsophagus behind the heart shadow. The child was sent over rough roads for 50 miles. X-rays again showed the pin in the same position at the level of the 4th dorsal vertebra. The point was upwards. Œsophagoscopy was done and the pin was not found. An X-ray twenty-four hours later showed the pin apparently in the cæcum; it was eventually passed. The pin was about an inch in length. ANDREW CAMPBELL.

Advantages of Brominised Oil in Bronchography in Tuberculous Patients. SAMUEL IGLAUER, M.D., Cincinnati, and HUGH KUHN, M.D., Hammond, Ind. (*Journ. Amer. Med. Assoc.*, 21st April 1928, Vol. xc., No. 16.)

The authors, after reviewing the advantages of bronchography and the dangers of iodised oil in tuberculous patients, report a series of 18 cases of pulmonary tuberculosis in which brominised oil was used. The oil is called bromipin and is a chemical combination of $33\frac{1}{3}$ per cent. of bromine in sesame oil. Owing to its viscosity the oil is warmed to 104° Fahrenheit. Each patient received an injection of 20 c.c. with no permanent deleterious effects. The injections were given by means of a two-barrel intubation tube, one channel for the oil and the other for breathing. To the oil channel a rubber piece 6 inches long was attached. The larynx was first cocainised and 4 c.c. of 1 per cent. procaine injected into the bronchial tree.

ANGUS A. CAMPBELL.

A Bullet in the Lung: Bronchoscopic Removal with the Aid of Magnetic Fixation. CHEVALIER JACKSON, M.D. (Philadelphia). (*Journ. Amer. Med. Assoc.*, 21st April 1928, Vol. xc., No. 16.)

The author reports the case of a Canadian soldier who received a bullet wound in the left side of the lower jaw in 1918. The local wound healed but cough and expectoration developed, lasting for some years. X-ray examination showed a machine-gun bullet in a cavity in the upper lobe of the left lung. As there was no other wound except in the jaw it was concluded that the bullet had been inspired and must have been in the lung for ten years.

A first bronchoscopy in the fluoroscopic room was unsuccessful as the bullet passed into the upper part of the cavity. A second

bronchoscopy was performed a few days afterwards when a magnet was used to hold the bullet at the lower part of the cavity. It was finally extracted with some difficulty and the patient made a good recovery.

The article is illustrated. ANGUS A. CAMPBELL.

The Relation between the Bacterial Flora and Tracheobronchial Foreign Bodies: A Preliminary Study based on One Hundred Cases. CARL J. BUCHER, M.D. (Philadelphia). (*Journ. Amer. Med. Assoc.*, 1st Sept. 1928, Vol. xci., No. 9.)

In Dr Jackson's clinic cultures were made in 100 patients who had tracheal and bronchial foreign bodies. The cultures were made with a bronchoscope, great care being observed to prevent contamination from the mouth or throat. An accompanying table shows the type of foreign body, the organisms isolated, and the frequency of their occurrence. Three types of foreign body were encountered—(1) vegetable, (2) teeth and bone, (3) metallic. Pure cultures were rarely obtained, there being usually 2, 3 and 4 types present. Streptococci were the most frequent but pneumococci and staphylococci were also found frequently. No particular kind of bacteria could be associated with any type of foreign body, although vegetable foreign bodies, such as peanuts, were nearly always accompanied by grave infection.

The degree of infection seems to depend more on the type of foreign body, the degree of obstruction to drainage, the age of the patient and the sojourn of the foreign body in the bronchus, than on the kind of bacteria present. ANGUS A. CAMPBELL.

MISCELLANEOUS.

The Work of the American Board of Otolaryngology: Its Influence in Raising the Standards of the Speciality. FRANK R. SPENCER, M.D. (Boulder, Colo.) (*Journ. Amer. Med. Assoc.*, 14th July 1928, Vol. xci., No. 2.)

In a six column article the author reviews the need for such a Board and names its personnel.

He states that the first examination was conducted in May 1925. Since that time 1179 otolaryngologists have received the certificate of the Board and have had their names placed on the directory. The number of failures has not exceeded 17 per cent. A detailed report is given in which it is recommended that intending otolaryngologists be graduates of class A medical schools and spend a year as an intern in an approved general hospital; that preparation for special practice

be started immediately after this hospital year; that the minimum training be 18 months, preferably 36, the first 12 of these in one place; that there be genuine post-graduate instruction in the fundamental sciences; that special attention be given to the teaching of the relation of otolaryngology to general medicine and that no higher degrees should be granted, but that the student receive a suitable certificate. The Board hopes to assist candidates by securing a uniformity in the course of study, by preparing lists of hospitals and their facilities, arranging with these hospitals to limit their appointments to candidates possessing the outlined qualifications, and obtaining suitable degrees from universities for such candidates.

ANGUS A. CAMPBELL.

Active Immunisation and Diphtheria. P. M. MAY and S. F. DUDLEY. (*Lancet*, 1929, ii., 656.)

These authors give conclusions as to the Schick test and anti-diphtheria inoculations carried out last year in a large residential school. Their conclusions are argued with strict fairness and it seems right to deduce from them that the freedom from diphtheria in an institution which had had an average morbidity of 4 per cent. for the previous ten years was a direct result of the artificial production of an active immunity, and not merely *post hoc ergo propter hoc.* It is interesting to note that out of 1004 parents and guardians only seven refused to allow their boys to be protected against diphtheria, and that that there was no reaction following nearly a thousand prophylactic injections that necessitated a single boy standing off duty for a day.

MACLEOD YEARSLEY.

Pollen Content of the Air: Relationship to the Symptoms and Treatment of Hay-fever, Asthma and Eczema. W. W. DUKE, M.D., and O. C. C. DURHAM, Kansas City, Mo. (*Journ. Amer. Med. Assoc.*, 12th May 1928, Vol. xc., No. 19.)

Surface reactions caused by pollen, such as hay-fever, asthma, and dermatitis of the exposed parts, vary in intensity at different seasons, during different weeks of the same season, or at different times during a given day. For this reason the authors report daily observations on the pollen content of the air during the period of one year in two localities in Kansas City. In doing this so-called "pollen plates" are made each day by smearing a thin layer of white petrolatum on an ordinary glass slide and exposing it to the air for twenty-four hours. A small cover is kept about 3 inches above the slide to protect it from soot and rain; soot and rain being heavier than pollen, fall in a more vertical direction and are more easily caught by the cover. Pollen

counts are made by examining the slide with a low power objective. Charts are made during the season and a number of peaks are noted, especially during the tree, grass and ragweed seasons. The highest peaks are found on sunny or windy days, especially on days following rain favourable to the pollination of plants. The marked irregularity of the charts often corresponds with the variation in symptoms displayed by patients from day to day during a given season.

The article occupies three pages and is illustrated by several charts and tables. ANGUS A. CAMPBELL.

OTO-LARYNGOLOGY IN BIRMINGHAM.

(*Contributed.*)

THE EIGHTH MEETING OF THE VISITING ASSOCIATION OF THROAT AND EAR SURGEONS OF GREAT BRITAIN AT THE UNIVERSITY OF BIRMINGHAM, AND THE GENERAL HOSPITAL, BIRMINGHAM.

AT the outset of the meeting there was an informal visit to the Spa and the Brine Baths in Droitwich.

Dr Campbell and Dr Dawson escorted the members round the baths, and explained the main features of the brine treatment.

The meeting commenced at the University with an admirable demonstration by Professor de Burgh Daly, on what is known technically as "The heart, lung preparation." He had the heart and lung of a dog completely isolated from its connections, the circulation of which was kept up artificially by means of a mercury pump, and respiration by means of a bellows, the movements of the heart and lungs being kept going naturally for four hours.

He showed the effect of various drugs, such as adrenaline, digitalis, and atropin, and recorded tracings on a revolving drum.

The experiment was a great success and proved of much interest.

Professor Daly recorded how it was possible to decapitate the head of a dog, maintain a circulation along the vessels, and keep the head alive for several hours, during which period the dog would show signs of hearing and would wink its eyelid and prick up its ears.

Unfortunately it was not permissible in this country to reproduce the actual experiment.

Professor Brash then gave a most interesting demonstration illustrating bone-growth in pigs fed on madder and its derivatives.

The areas of new bone-growth appeared pink in the dried skulls. He demonstrated the method of growth of the alveolus, palate, upper jaw, and malar bone.

He also had skulls of rats and mice stained purple and white, in which experiment he used a slightly different intra-vitam dye.

The method struck the otologists particularly as one which could very well throw some light on the development of new bone around the internal ear and render assistance in the pathological study of otosclerosis.

The members then moved on to the new University Buildings at