

ABSTRACTS

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Questions on Localization within the Central Vestibular System. Part II. Variations in Position of the Head and Trunk of Vestibular Origin. RUDOLF LEIDLER. (*Monatsschrift für Ohrenheilkunde*, lxx, 1936, 951.)

A series of cases is described in which variations in position of the head and trunk (together with ocular deviation and nystagmus) occur as the result of vestibular stimulation. The author analyses these cases, and endeavours to localize the lesions concerned.

An exact localization within the central vestibular system is, in the meantime, not possible. It can be stated, however, that neither the labyrinth, the vestibular nerve, nor its endings in the brain stem are responsible for the positional variations of the head and trunk as seen in the cases described. The most likely region concerned is the neighbourhood of the termination of the posterior longitudinal bundle. The proximity of the sleep regulating centre may account for the sleepiness and loss of consciousness met with in some of these cases.

The recent advance in symptomatology of diseases of the central vestibular system necessitates a departure from the indefinite conception of "under" and "over"-stimulation. A summing up of the individual symptoms and comparison with the normal is preferable.

DEREK BROWN KELLY.

Microscopical Investigation of the Middle and Internal Ear in Cerebral Tumours in Man. B. HANSSON and C. O. NYLÉN (Upsala). (*Acta Oto-Laryngologica*, xxiii, 3 and 4 (1936).)

This investigation comprises the microscopic examination of the twelve labyrinths from six cases of cerebral tumour in human beings.

Clinically all the cases showed various abnormal symptoms such as papillary stasis and abnormal eye movements. In none of the cases did the bony labyrinths show any definite changes. In one case the fenestra rotunda on one side was bulged out and on the other side there was acute purulent middle-ear inflammation.

Beyond *post mortem* changes in the labyrinths in two cases there were no abnormal findings in the inner ear. The following are the author's conclusions:—

(1) That in these cases of cerebral tumours (in the pons, in the fourth ventricle, in the brain stem and cerebellum, and in the central region of the cerebrum) with increased intracranial pressure,

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no clear signs of stasis in the labyrinths ("stasis labyrinths") could be proved, except in one case (No. III);

(2) That the vestibular organs in these labyrinths showed no microscopically visible pathological alterations which had arisen during life.

This does not, however, exclude the possibility that slight abnormal changes in pressure (Mygind), or slight pathological conditions of some other nature, might have existed during life (Wittmaack); but the results of the investigation speak in favour of the assumption that the pathological symptoms from the vestibular system—chiefly the abnormal movements of the eyes—in the cases of cerebral tumours described above, are not due in the first place to labyrinthine alterations, but to alterations central to the labyrinths.

H. V. FORSTER.

Contribution to the Statistics of Otitic Brain Abscess.

A. I. KOLOMITCHENKO (Kief). (*Acta Oto-Laryngologica*, xxiii, 3 and 4 (1936).)

The writer presents a series of thirty-one brain abscesses which he has had occasion to observe during the eight years 1927-34. Eleven of these were operated upon by the former Director of the Clinic, Professor Stavradi, the others coming to the Clinic since Professor Kharchak has been in charge.

Out of 1,476 mastoid operations during this time 2.1 per cent. were for abscess of the brain. The greater number of the cases were found in individuals between 20 and 30 years of age.

A table is given showing the frequency of certain points of clinical interest which are compared as far as possible with the records of a certain number of other observers. Thus the percentage of males was 78.1; females 21.9. Right side affected 45.2; left 54.8; associated with chronic otitis media 93.6; acute 6.4; temporal lobe abscess 61.3; cerebellar 38.7; cases of temporal lobe abscess cured 12.5; cerebellar 25. Total number of cases 31.

Another table which shows the percentage of cures 16.1 gives a comparison with the cures recorded by some other observers. In the same way he deals with abscesses found and drained and those not found or not explored for, and later for both cerebral and cerebellar abscesses his own material is tabulated to show the relation between diagnosis and the results of exploration.

In the majority of the cases the abscess had apparently developed by contact infection. The exact diagnosis of the presence of an abscess is not always a simple matter, though in the presence of headache, depression and apathy, the diagnosis becomes easier and, if the condition of the temperature and pulse did not contradict these signs, operation was carried out.

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The authors believe that one should be prepared to suspect a brain abscess on the general symptoms lest in waiting for some definite localizing or typical sign the case is left too late.

H. V. FORSTER.

Comminuted Fracture of the Labyrinth, not involving the Cochlea. Meningitis sixteen years later. E. SCHLITTLER. (*Acta Oto-Laryngologica*, xxiv, 2.)

A fall on the head was followed, in the case of a man 28 years of age, by a brief period of unconsciousness and loss of memory, with vomiting and bleeding from the right ear due to a rupture of the tympanic membrane. After recovery he was found to have no caloric reaction on the right side, and to be extremely, but not totally, deaf in the right ear.

Sixteen years later he suffered from an attack of acute suppurative otitis media of the same ear and died, after a short illness, of pneumococcal meningitis.

Post mortem examination showed no macroscopic evidence of fracture of the petrous bone or of the base or vault of the skull. Microscopic examination, however, showed with certainty that the path by which the tympanic infection had spread to cause a lethal meningitis was the line (partly filled only with connective tissue) of a comminuted fracture of the vestibular part of the labyrinth, the result of the injury sixteen years earlier. The cochlea had escaped fracture, but the soft tissues about the basal coil had been damaged by tearing of the membrane of the round window.

Particular points of interest in connection with the case were the following:—

(1) Although the fracture line did not pass through the cochlea, there were multiple fractures of other parts of the labyrinth, and yet the loss of hearing was not complete. This is contrary to the usual experience that an injury by which any part of the endolymph space is opened results in complete loss of function of the whole labyrinth.

(2) Rupture of the tympanic membrane is unusual in cases of comminuted fracture of the labyrinth not involving the walls of the tympanic cavity.

(3) Isolated fracture of the cochlear portion of the labyrinth has been described by Klingenberg. It now appears that isolated fracture of the vestibular portion may also occur.

(4) The case demonstrates the importance, in obscure cases of fatal otitic meningitis, of a microscopic examination. It also shows that some doubt must be entertained as to the ultimate prognosis in patients who have recovered from fracture of the labyrinth.

THOMAS GUTHRIE.

Nose and Accessory Sinuses

The Histology of the Labyrinth in a case of Tumour of the Apex of the Pyramid. E. RUTTIN. (*Acta Oto-laryngologica*, xxiv, 1.)

The patient was a man, 30 years of age, in whom a neuroma of the trigeminal nerve had destroyed the apex of the pyramid as far as the internal auditory meatus without, however, extending so far as to involve the cochlear and vestibular nerves in the mass of growth.

On the same side as the tumour there were only small remains of hearing, complete absence of caloric reaction, strongly marked spontaneous nystagmus towards the opposite side, and extreme hyperexcitability to rotation, so that even a single revolution on the turning stool towards the opposite side produced intense vertigo and nystagmus.

Microscopic examination of the labyrinth on the same side as the tumour showed choking or engorgement of the perilymphatic spaces of the cochlea, vestibule and ampullae, due to closure of the ductus perilymphaticus. There were no inflammatory appearances and no choking or distention of the endolymphatic spaces. The choking of the perilymphatic spaces had caused atrophy of the organ of Corti and of the nerves and ganglion cells in the basal turn, and was no doubt responsible for the loss of hearing and of caloric reaction. The horizontal spontaneous nystagmus towards the opposite side was of central origin and due to pressure of the tumour on the fourth ventricle. This nystagmus was much increased by bending the head towards the opposite side, thus causing perhaps a sudden increase of the pressure exerted by the tumour on the fourth ventricle.

The absence of caloric reaction on the same side as the growth, with greatly increased reaction to rotation is often to be observed in cases of brain tumour. It may possibly be explained by supposing that the nerve fibres for caloric and rotatory stimulation take different paths and are not equally sensitive. The greatly increased sensitiveness to rotation is in any case not identical with the phenomenon that the author has described in cases of acoustic tumour and has called over-compensation, for in this, while there is deafness and absence of caloric reaction on the same side as the tumour, the sensitiveness to rotation on both sides is normal.

THOMAS GUTHRIE.

NOSE AND ACCESSORY SINUSES

Studies of Ozæna. K. KURATA. (*Monatsschrift für Ohrenheilkunde*, lxx, 1936, 1075.)

In a well-illustrated paper, the author supports Glasscheib's theory that ozæna is due to an avitaminosis. He has carried out the undernoted experiments.

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By feeding rats on a diet lacking in Vitamins A and D, a deficiency disease similar to ozæna in man was produced. Crusting occurred in the nostrils of the affected animals, and on examination of the nasal mucosa, atrophy of the glands was found. The cavernous tissue disappeared. At a later stage, a small cell infiltration of the epithelium and of the deeper mucosal layers took place. The columnar ciliated epithelium underwent metaplasia, being replaced by pavement cells. Bony atrophy finally occurred.

A series of animals affected with this atrophic rhinitis were injected with acetyl-choline (a vagotonic substance). As a result, the atrophic process and crust formation became less marked. A considerable dilatation of blood vessels in the deeper layer of the mucosa occurred.

The writer concludes that ozæna is a deficiency disease due to lack of vitamins and sunlight. The specific symptoms appear at puberty due to rapid development of the "sympathico-endocrine" glands.

DEREK BROWN KELLY.

Zinc Ionization in Nasal Allergy. L. B. BERNHEIMER (Chicago).
(*Jour. A.M.A.*, cvi, 23, June 6th, 1936.)

Twenty-five patients suffering from non-seasonal allergic rhinitis and ten cases of seasonal hay fever were treated by zinc ionization. In the former group only five were free from symptoms from five to eleven months. In the latter group the clinical course of hay fever was not altered in any way.

By way of comparison twenty individuals suffering from hyperæsthetic rhinitis, and ten others with hay fever, were treated with trichloroacetic acid or phenol. The escharotics were applied to the anterior tips of the middle turbinates, the medial and anterior tips of both inferior turbinates and both sides of the anterior septal wall.

Slightly better results were obtained through the use of escharotics than by ionization in the hyperæsthetic cases but not in the cases with hay fever. Histologically it was impossible to differentiate mucous membrane that had been ionized from mucous membrane that had been treated with escharotics. In neither instance was there marked evidence of fibrosis.

Following ionization two patients suffering from hyperæsthetic rhinitis developed temporary anosmia and one a temporary unilateral sphenopalatine neuritis, while no complications followed the use of escharotics.

ANGUS A. CAMPBELL.

The Biological method of Surgical Cure of Ozæna. I. T. DOROSCHENKO
(Dnjeprostroj). (*Acta Oto-laryngologica*, xxiv, 2.)

In spite of a variety of methods to cure ozæna the results are not always satisfactory. The majority of these methods aim at narrowing the nasal passages. Thus Eckert-Mobius inserts a piece

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of ox-bone under the mucosa of the nasal septum. Lautenschläger, Hinsberg and Halle narrow the nasal passage at the expense of the osseous lateral wall. Almeida performs dacryocystorhinostomy. The author prefers to insert a piece of rib cartilage beneath the nasal mucosa as this is found not to be absorbed. A piece of the last true costal cartilage is removed, along with its periosteum on one side, and the nasal septum having been prepared by surface cocaine anæsthesia the cartilage is put into position with the side bearing the periosteum lying beneath the mucoperiosteum of the elevated septal mucosa.

H. V. FORSTER.

LARYNX

Operative Treatment of Chronic Laryngeal Stenoses. A. SERCER.
(*Monatsschrift für Ohrenheilkunde*, lxx, 1936, 1153.)

The author describes a "submucous exenteration of the larynx" as practised in his clinic for stenosis. The operation is carried out in the following manner. After laryngo-fissure, two parallel incisions are made along the true and false cords as far as the posterior laryngeal wall. Through these two cuts, and through the medial incision, the mucosa is raised, and the ventricles of Morgagni and laryngeal contents are removed with small scissors and fine elevators. Bleeding is controlled with adrenalin tampons and pressure.

The exenteration completed, the mucosal flaps are replaced with fine catgut sutures. A tracheotomy tube and Mikulicz tampon are inserted. On the fourth or fifth day the latter is removed.

Union of the skin of the neck with the mucous membrane of the larynx takes place. The laryngostoma is kept patent until the patient can meet all demands in the way of heavy breathing without the tube and with the stoma closed with plaster.

The stoma is closed finally by plastic operation; usually double skin flaps. With larger defects of the anterior laryngeal and tracheal walls, cartilage or bone must be transplanted between the flaps.

DEREK BROWN KELLY.

The Influence of Histological Structure in the Treatment of Papilloma of the Larynx by X-rays. J. KOCH. (*Arch. Ohr-, u.s.w. Heilk.*, 1936, cxlii, 83-96.)

The author gives the clinical histories of twenty-two cases of papilloma of the larynx treated by X-rays and describes the exact dosage and methods of irradiation. The cases are divided into: (1) Those treated by X-rays without previous operation. (2) Those treated by X-rays after several unsuccessful operations. (3) Those irradiated soon after complete surgical removal of the

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papillomata. Speaking generally, treatment by small doses of soft rays was less successful than treatment by hard rays over a longer period. However, the type of ray and dosage alone are not sufficient to explain why some cases respond well and others are resistant.

He divides laryngeal papillomata into (*a*) those with a broad base and a preponderance of fibrous connective tissue. (*b*) Those with many finger-like processes, a preponderance of epithelial tissue and numerous vessels in the fibrous tissue base. Group (*a*) included most of the good results from X-ray therapy. Among group (*b*) there were many failures. Secondary inflammatory changes in the papillomata caused by previous surgical interference diminished their sensitiveness to irradiation. Some papillomata belonging to group (*b*) are so resistant that X-ray treatment will always fail. It is impossible to increase the dosage beyond a certain maximum point for fear of causing permanent damage to the larynx.

The best results are seen when X-rays are used some two to three days after complete surgical removal of the tumours. According to Dr. Koch, this is the best method of treatment. It should always be adopted, unless there is a serious contraindication to operation.

J. A. KEEN.

TONSIL AND PHARYNX

Histological Examination by Serial Sections of Tonsils and Adenoid Vegetations. E. URBANTSCHITSCH. (*Monatsschrift für Ohrenheilkunde*, lxx, 1936, 1177.)

Over a period of eighteen months, 446 patients had their tonsils and adenoids removed and histologically examined. Sixty per cent. of these cases were females, many of whom were in hospital for some general disease, rheumatism, endocarditis, etc.

All specimens examined showed alterations due to chronic inflammation. In seven cases, deposits of lime salts were seen, and in thirty-three extensive fungus colonies.

In twenty-five patients (5.6 per cent.) cartilage and bone were found in the tonsil bed. The author considers this to be a metaplasia, quite distinct from those cases of elongated styloid process.

Epithelioid-cell tubercles were present in five cases (the adenoids were affected in two instances) where there was no evidence of a general infection nor any suspicion of the disease macroscopically.

In two cases (a man aged 35, and a girl aged 10) a carcinoma was proved to be present in the tonsils. Macroscopically the tonsils were of similar size and showed no external evidence of neoplasm. In both the chemical blood test (Freund-Kaminer) was positive.

DEREK BROWN KELLY.

Bronchus

The Clinical Significance of Compensatory Granular Pharyngitis.

HAROLD S. LITTLE. (*Archives of Oto-laryngology*, xxiv, No. 3, September, 1936.)

After removal of the faucial tonsil there is a tendency in certain cases for the lateral pharyngeal bands to increase and to give rise to an unpleasant sensation. This may consist of sore throat, sensation of foreign body or accumulation of mucus causing swallowing or hawking. In such cases the topical application of remedies to the pharynx is disappointing. The writer has found that the ingestion of iodides gives good results, although he is unable to explain their action.

DOUGLAS GUTHRIE.

BRONCHUS

Bronchoscopy in Pulmonary Atelectasis in Children. M. DE BRUIN and P. G. GERLINGS (Amsterdam). (*Acta Oto-laryngologica*, xxiv, II.)

(a) *Nomenclature.*

Atelectasis is a name for complete airlessness of a part of the lung. When bronchial occlusion occurs suddenly the air is absorbed quickly with a considerable diminution in volume. When it occurs more slowly the lung will be filled partly with transudate and exudate and collapse will not follow. This is a condition of drowned lung and after reventilation many rhonchi will be heard.

(b) *Ætiology.*

Next to foreign bodies a common cause is external pressure on a bronchus. There is also congenital atelectasis as described by Manges. Pneumonia, as pointed out by Jacobaeus, is a common cause of lung collapse. It has even happened after lipiodol injection. Bronchitis and pneumonia are a commoner cause of collapse in children than is usually supposed. They cough ineffectively and the bronchial lumen is narrow. Attention has been called in America to the favourable influence of bronchoscopic aspiration of the air passages in bronchitis and pneumonia. After pneumonia, collapse of a whole lobe or part of a lobe may remain.

(c) *General Considerations.*

It took a considerable time to learn how to diagnose collapse of one lobe of the lung. The so-called "triangle de Chauffard" shown on X-ray examination was often thought to indicate pleuritis mediastinalis inferior, which in some cases it does, but it may be demonstrated on foreign body cases in whom the phenomenon is definitely caused by lung collapse. The picture has been produced experimentally in dogs by causing bronchial obstruction.

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(d) *Radiology.*

Pictures of collapse of different lobes are illustrated.

(e) *Clinical Symptoms.*

The clinical manifestations due to the occlusions of a large bronchial branch show variety. Sometimes the general symptoms are very slight and without pyrexia. Exact localization of the heart dullness is important to aid diagnosis which is rarely arrived at without a radiogram, particularly if the process is on the left side and especially if the occlusion is a complication of previous pathology. The author proceeds to describe and discuss four cases to illustrate the difficulties.

(f) *Prognosis.*

The prognosis of atelectasis in children is uncertain. Reventilation may occur even a long time after occlusion but if it does not the development of bronchiectasis is probable.

(g) *Therapy.*

A successful result follows in foreign body cases unless removal has been delayed for some time. In the cases where lung collapse is the result of pneumonia intervention by bronchoscopy should not be delayed too long. Once bronchiectasis has developed only surgical treatment can have a chance of success. In performing bronchoscopy Haslinger's instruments are preferred.

Subglottic œdema has followed bronchoscopy in a few cases. Intramuscular injections of calcium sandoz have been found to be uncertain to give relief but, apart from urgent tracheotomy, local treatment of the subglottic area according to Van Gilse has been found satisfactory.

Under direct laryngoscopy, fibrinous tags are removed by cotton mops soaked in oil, followed by an application of 1-1,000 adrenalin to the subglottic swelling and then 1 per cent. silver nitrate.

H. V. FORSTER.

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Concerning Five Cases of Parotid Lithiasis. RUPPE LATTES and MME. VOISIN. (*Les Annales d'Oto-Laryngologie*, June, 1936.)

The fact that parotitis is relatively common and that calculi in the parotid are relatively rare, whereas the opposite obtains in respect of the submaxillary gland, is well known. The reason for this is probably due to the difference in the secretion of these glands. That of the parotid is poor in mucin, whereas the submaxillary saliva is rich in mucin. The fact that mucin readily

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dissolves mineral salts and is strongly bactericidal probably accounts for these facts. The authors of this article have been fortunate in meeting with five cases of parotid lithiasis, and we are presented with full clinical records of these cases.

Parotid lithiasis may occur at any age, manifesting itself by swelling and pain, and sometimes leading to suppuration. Abscesses which occur in connection with Stenson's duct anterior to the masseter are the most favourable, as these often discharge into the mouth. Those occurring more posteriorly in the gland may lead to a salivary fistula and are best treated by radiotherapy. Diagnosis with lipiodol helps to differentiate between intermittent parotitis, cysts of Stenson's duct, and parotid abscess.

M. VLASTO.

The Autonomic Nervous System in relation to Oto-laryngology.
ALBERT KUNTZ (St. Louis). (*Jour. A.M.A.*, cvii, 5, August 1st, 1936.)

The autonomic innervation of the mucous membranes and involuntary musculature of the upper respiratory tract, the paranasal sinuses, the middle ear and the auditory tube includes both sympathetic and parasympathetic nerves. The sympathetic nerves are derived mainly from the superior cervical sympathetic ganglion and the parasympathetic nerves arise mainly from the sphenopalatine ganglion and the intrinsic ganglions of the pharynx and larynx. The functional state of the mucous membranes, including their secretory and ciliary activity, is regulated and controlled through the autonomic nerves and is intimately related to the functional state of the peripheral blood vessels. Inflammatory reaction differs only in degree from the normal physiological response.

That the autonomic nerves are at fault in allergic disorders is indicated by the sudden appearance of their manifestations. In cases of allergic rhinitis the water content of the nasal secretion is increased and the calcium content diminished. The reduction in the calcium content of the nasal secretion is probably an expression of a shift in the acid-base balance of the body fluids toward alkalinity. The acid-base balance, which is closely associated with the autonomic balance must therefore be regarded as an important factor in the ætiology of allergy.

Therapeutic measures designed to restore the acid-base balance and, consequently, the autonomic balance seem to be indicated in allergic cases and in various other conditions in which the functional activity of the respiratory mucous membranes is disturbed.

Vessels of the cavernous or erectile tissue in the nasal mucosa react to nerve stimulation in a manner differing from that of the vessels in the adjacent mucous membrane.

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The autonomic nerves undoubtedly play a rôle in the production of referred pains but not as conduction pathways for pain impulses. Impulses arising at the site of the lesion are conducted into the brain stem through the corresponding fibres of the trigeminal nerve. The trigeminal fibres in question effect reflex connections with visceral efferent neurons in the upper thoracic segment of the spinal cord. The axons of these neurons join the sympathetic trunk and ascend to the superior cervical ganglion where they effect synaptic connections with sympathetic neurons whose axons extend into the area in which the referred pain is localized.

ANGUS A. CAMPBELL.

The Ætiology and Treatment of Hæmorrhage of the Nose and Throat.

HENRY M. GOODYEAR (Cincinnati). (*Jour. A.M.A.*, cvii, 5, August 1st, 1936.)

Thromboplastic agents are of doubtful value in hæmorrhage. Blood transfusions have no value in purpura hæmorrhagica but are very helpful in hæmophilias and other hæmorrhages. Hæmorrhagic telangiectasis responds best to the chromic acid bead while 50 per cent. nitrate of silver is most satisfactory in hæmorrhages from the anterior nasal septum. Gauze packing in the region of the anterior wall of the sphenoid is effective in bleeding from an injured sphenopalatine artery. No adenoid operation should be considered complete without retraction of the soft palate and direct examination of bleeding points. Radical removal of the tonsils in search for the bleeding point is indicated in persistent bleeding from tonsil infection either before or after incision, and if the bleeding is severe the common carotid artery should be tied. The external carotid artery should be tied in intractable nasal hæmorrhage and severe bleeding about the tonsil. The internal jugular vein and not the carotid vessels should be tied when bleeding occurs in suppurative cellulitis following an illness such as scarlet fever.

ANGUS A. CAMPBELL.

Septic Diseases of the Internal Organs and General Sepsis of Tonsillar, Buccal and Nasal Origin. M. F. ZYTOWITSCH. (*Monatsschrift für Ohrenheilkunde*, lxx, 1936, 932.)

The experiments of various writers are described together with case histories and the author's own conclusions. The contents of the paper may be summarized as follows:—

1. Colloidal dye particles applied to the mucosa of the nose and buccal cavity eventually reach the tonsil.
2. These particles are neither absorbed by the tonsils of experimental animals, nor by those of humans suffering from

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tonsillitis. The tonsil, therefore, is not to be considered as a portal of entry for infection.

3. Watery extracts of the tonsils exert a direct action on the blood vessels and blood pressure. Experiments on vagectomized rabbits show that the extract contains a vagotropic substance.

4. Cauterization of the tonsils alters the constitution of the extract and the biochemical state of the organisms.

Dick and Shick reactions, blood sugar content, etc.

5. Tonsillectomy in young animals causes widespread alterations in the thyroid, adrenals and sex glands. These changes persist in the animals' descendants. The breeding capacity of tonsillectomized animals is impaired.

6. The tonsils should be considered as endocrine organs of great physiological importance. They should be removed only in special cases, after strict attention has been paid to the state of the nasal and buccal cavities.

DEREK BROWN KELLY.

Basal Meningitis. FERRIS SMITH (Grand Rapids, Mich.). (*Jour. A.M.A.*, cvii, 3, July 18th, 1936.)

The writer discusses the anatomy in considerable detail, especially the venous channels at the base of the brain. These are the cavernous sinus, circular sinus, basilar plexus and the inferior petrosal veins, which are really parts of one system. It is in the area of this so-called basal cistern that the well-organized exudate is seen in cases of fatal basal meningitis. There may be an osteoporosis, an osteitis or an osteomyelitis of the bone in this area.

The physiological action of the pia arachnoid produces a barrier more or less temporary, depending on the virulence of the infection. The pia arachnoid of the basal cistern adheres to the dura and limits, for the time being, the invading infection. It is only when the infection involves the veins or follows the arterial sheaths traversing the pia that the barrier is broken down and the infection produces a fatal leptomeningitis.

Treatment, to be effective, must drain the involved sinus mucosa, bone, and the basal cistern. Two methods of surgical approach are suggested, first by proceeding through the nose, and the second through the soft palate. The first case presented had a meningitis following chronic pansinusitis. After dealing with the infected bony floor and the sphenoid cavity a burr of three-sixteenths inch diameter was introduced through the nose in the mid-line at an angle directed toward the middle third of the pons. The burr was driven into the sphenoid bone for three-eighths of an inch and was then changed for a smaller one. This provided a slot for a tube to be introduced after the dura had been opened. The smaller drill was driven through the medullary and superior cortical

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bone to the dura. The drill was removed and the dura opened. A soft tube having the same diameter as the initial drill was passed through the nose into the drill hole. Considerable immediate reaction was noted but the patient eventually recovered.

Two other cases of meningitis are reported, one following mastoiditis and the other following chronic osteitis of the sphenoid bone. Both these were treated in a similar manner, except that the burr was introduced through the mouth and the soft palate, but both these patients died.

There is considerable sudden loss of spinal fluid despite the fact that the drill hole is partly closed by the rubber tube. The fluid should be slowly withdrawn until the drainage is complete. The writer believes this to be an ideal method of draining infections extending from the petrous tip, as well as those originating in the sphenoid sinuses.

Direct intra-arachnoid medication is dangerous.

The article occupies ten columns and is freely illustrated.

ANGUS A. CAMPBELL.

Exhibition of a Cinematograph Film, showing the Respiratory Movements of a New-born Child with Bilateral Choanal Atresia.
P. H. G. VAN GILSE. (*Acta Oto-laryngologica*, xxiv, 1.)

A very young child cannot breathe quietly through the mouth. Even when the mouth is more or less open, the position of the tongue makes breathing through the mouth only impossible. Only when the child cries it inspires through the mouth (and even then not continuously). When the nose is completely blocked, breathing during sleep is impossible unless an opening is made, by forced breathing through the lips and the tongue. When the nose is blocked it is also impossible to take food by sucking, and swallowing becomes likewise very difficult. The film shows how a new-born child with complete obstruction contrives, although insufficiently (cyanosis, restlessness), to breathe during sleep. An opening is formed by in-drawing of the lower lip above the jaw when the child inhales. During this process movements in the neck are particularly noticeable. The film also shows a similar process in a boy of eight years. Here also, during forced inspiration with the nose blocked, the relaxed lips are drawn in above the jaw and an opening results. Movements are seen in the neck similar to those which are seen in the new-born child with choanal atresia. In adults this mechanism is less marked because the tissues are less flexible.

The treatment in this case consisted in the perforation of the tissue which blocked the choanae by means of a trocar intended for maxillary sinus puncture, which happened to be curved so as to be exactly suited for the purpose. Later, the opening was

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maintained by inserting a similar trocar with a blunt point from time to time. Immediately after the perforation had been made breathing became quiet, the movements in the neck ceased and the child could suck.

[Author's Abstract.]

The Treatment of Post-Diphtheritic Paralysis with the Bragg-Paul Pulsator. C. J. MCSWEENEY. (*Lancet*, 1936, ii, 1093.)

The Author gives details of twelve cases thus treated in Cork Street Hospital, Dublin. In nine the method was successful, three died. The three fatal cases were due to the breakdown of the pulsator in one, syncope in one, and a gangrenous complication in a third. In all the pulsator maintained the respiration satisfactorily, save in one case in which a mechanical breakdown in the instrument occurred. No interference was caused to the routine management, nursing and treatment of the patients, all of whom were nasally fed for a coexistent pharyngeal paralysis while in the pulsator. The majority of the patients treated were quite young children, but none raised the slightest objection to the application of treatment in the apparatus. They slept normally while having artificial respiration, and the operation of the pulsator in the ward did not affect the comfort of the other patients. There can be no doubt that the introduction of this simple apparatus marks a great advance in the treatment of respiratory paralysis following diphtheria, a condition which, in the writer's experience, has always proved fatal.

MACLEOD YEARSLEY.

Two Cases of "Mixed Tumour" of the Soft Palate. M. OMBRÉDANNE. (*Les Annales d'Oto-Laryngologie*, May, 1936.)

Mixed tumours of the soft palate are not very uncommon. As a rule they are small, encapsulated and easily separated from the surrounding parts. They seldom recur. Occasionally, however, due either to a faulty clinical interpretation or to an erroneous microscopical report, these tumours are regarded as cancers and treated as such. Others again, owing to their exceptional size, present a difficult problem for their surgical removal. The two cases reported in this paper are typical of the difficulties that may be encountered. The first case refers to a large tumour in the left tonsillo-palatine region, a piece of which was removed for biopsy and was reported upon as a spino-cellular epithelioma. Accepting this report as correct, the left external carotid was ligated and the tumour removed by electrocoagulation. Six years later, much to the surgeon's surprise, this patient again reported for treatment. It had not been supposed that the tumour was

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completely removed, and the long period which had elapsed before recurrence took place raised a doubt as to the correctness of the original microscopical report. Another biopsy revealed the true "mixed tumour" nature of the growth. A short description follows of the second removal of the growth. The second case refers to an enormous swelling of the soft palate, of which the only symptoms complained of by the patient were a slight impediment of the speech and slight deafness of the left ear. It seemed incredible, in view of the size of the swelling, that the patient complained neither of difficulty in breathing nor in swallowing. The swelling was round, smooth, and the surface non-ulcerated. The impression to the touch was that of a cyst under tension. Removal of the growth was performed after a preliminary tracheotomy and the author supplies us with the details of the special operative technique that had to be employed in dealing with so large a growth. The article concludes with some observations on the microscopical nature of these tumours. From the clinical point of view, these growths are interesting from their very slow development. This latter characteristic accounts for the remarkable tolerance to these enormous swellings due to an adaptation to the slow progress of the disease. Anatomically, these tumours can dissect the muscular layers of the soft palate, undermine the nasal mucosa, and become adherent to the surrounding bony structures and, in particular, to the pterygoid.

M. VLASTO.

Retrograde Sinus Thrombosis complicating Primary Thrombosis of the Jugular Vein. F. E. STONE and M. D. BERGER. (*Archives of Otolaryngology*, xxiv, No. 2, August, 1936.)

In describing two cases of this rare complication, both of whom recovered, the writers express surprise at the scantiness of literature on the subject. Eagleton reported a similar case in which recovery followed operation but as a rule the condition is only diagnosed on *post mortem* examination.

The routes of infection from the tonsil to the intracranial venous channels have been studied by a number of observers. The spread may be directly venous, starting in the peritonsillar veins. In other cases the primary process may be lymphadenitis, which causes periphlebitis and then endophlebitis. Sometimes the veins are directly infected by collections of pus in their neighbourhood. Eagleton's series of twenty-five cases of infection of the face and neck complicated by intracranial pyogenic disease included only one case in which the original focus was in the tonsil, and similarly the series of fifty-five cases recorded by Turner and Reynolds included only one such case.

Miscellaneous

Thrombosis of the jugular vein following deep infection of the neck has often been labelled sepsis of unknown origin. Diagnosis is not easy. A history of sore throat followed by the classic signs of generalized sepsis should lead one to examine the neck. A tender swelling along the course of the jugular vein may be found. There may be trismus or spasmodic torticollis. The presence of choked disc in one or both eyes may suggest the presence of an obliterating thrombus, but the absence of this sign does not exclude thrombosis. The Tobey-Ayer test is of great value. Paralysis of the VIth nerve may indicate an increase of intracranial pressure. Otological examination reveals no abnormality. In some cases the temperature and blood count are normal, and blood culture is often deceptive. If diagnosis can be established, treatment is simple. Conservative measures are useless. The jugular vein must be widely exposed, ligatured below the thrombus and traced upwards. The lateral sinus should also be exposed and dealt with, as in cases of otogenous infection, and the bulb may sometimes be cleared by suction. Repeated transfusion is of great value.

The two cases (a boy aged 1 year and 8 months, and a girl aged 4 years) are recorded in detail, also three cases previously recorded, two by Eagleton and one by Kernan.

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