ABSTRACTS

EAR

Otitic Meningitis—Its Ætiology and Treatment. PROF. H. NEUMANN. (*Revue de Laryngologie*, etc., January, 1934.)

This paper is based on observation of fifty-nine cases, extending over the six years 1928-33. Twenty-two of these recovered, which the writer modestly terms a "relatively favourable" result. It is a striking fact that of the successful cases, only one was over the age of 15. The writer states that the chief object of his paper is to combat the unduly pessimistic view that treatment is powerless to avert a fatal issue in these cases. There is a fair chance in young subjects if the diagnosis is made early, before septic invasion of the meninges has advanced far. Lumbar puncture for diagnostic purposes should be done in every suspected case at the earliest possible moment, and repeated frequently, but operative treatment should not be delayed pending the result of bacteriological and chemical investigation of the fluid. The operation recommended is a complete exenteration of the mastoid process carried to the point of outlining the middle fossa, the lateral sinus, the capsule of the labyrinth, and the digastric groove. The last, and most important, stage of the operation is the complete exposure of the dura mater and of the lateral sinus above and behind the mastoid. The superior ridge of the petrous bone should be removed. The dura is not opened. If properly performed this radical removal of bone will not prejudice the patient's chances of preserving the hearing, if he should recover from the meningitis, and when the cavity is healed.

In addition to operation 8 c.cm. of cyclotropine (a form of urotropine) is given by intravenous injection. The writer has also given urotropine in the form "solganal" intrathecally, but considers that the utility of this method has still to be proved, whilst it has grave disadvantages, causing severe pain in the legs, and sometimes paraplegia of indefinite duration.

G. WILKINSON.

Radical cure of Chronic Otorrhœa by operation through the Auditory Meatus. DR. P. GUNS. (*Revue de Laryngologie*, etc., November, 1933.)

The writer has devised an operation on the attic and mastoid antrum through an enlarged auditory meatus, for which he uses a special set of instruments of his own design. With regard to the theoretical justification for the operation, he starts with the assumption that, in practically all cases in which otorrhœa persists without

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other symptoms of mastoid inflammation, the mastoid is of the "sclerosed" type and the disease is limited to the middle ear, aditus and antrum. When a fistula into the auditory meatus is present, the cause is nearly always cholesteatoma of the aditus and antrum.

The operation consists of denuding the whole of the posterior-superior half of the meatus of skin and soft tissues, which are completely removed. The aditus is opened by chiselling into it from the meatus in the line of junction of the posterior and superior walls, at a point of junction of the outer two-thirds with the inner one-third. The opening is enlarged forwards and downwards into the attic, and backwards into the antrum. One assumes that a thorough curetting and cleaning of the tympanum, aditus and antrum is then carried out, though this is not definitely stated. "The operation is terminated by dressing the cavity with iodoform gauze, which is left in position for forty-eight hours. After this time the patient is allowed to leave the clinic, and to carry out the medicated dressing three times daily." The incidence of persistence of suppuration is no greater than after the usual retro-auricular operation. The same may be said of the risk of injury to the facial nerve. "The danger of wounding the lateral sinus in making the direct perpendicular attack on the aditus through the posterior wall of the meatus is entirely theoretical."

The operation has been practised at Louvain since 1928, and ninety cases, in all, have been so treated. Definite improvement in hearing has followed in 60 per cent. The special advantages of the procedure lie in the thinness of bone requiring removal to expose the cavities, and the consequent minimizing of concussion ; absence of local or constitutional disturbance after the operation, and simplicity of the after treatment.

G. Wilkinson.

Some Notes on the Ear in Relation to Head Injury. H. B. Harwood. (*Medical Journal of Australia*, May 12th, 1934.)

The writer reports forty consecutive cases of head injury in which the question of compensation arose on account of deafness or giddiness. Ten were motor car or cycle accidents, sixteen were falls on the head, and fourteen were blows on the head. Thirty-one, or 78 per cent., were rendered unconscious by the accident, and the longer the period of unconsciousness the greater the degree of deafness. Sixty-five per cent. had a nerve type of deafness, with positive Rinne test and loss of bone conduction. In 62 per cent. tinnitus was a symptom. Only a small percentage (12 per cent.) had discharge from the ear. Six patients had facial paralysis ; this had improved when seen. Thirty-two, or 80 per cent., complained of dizziness on stooping or on getting up suddenly, but only seven

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of them (14 per cent.) gave no reaction to the caloric test. The dizziness tended to become less, but in some cases it persisted for a long time.
DOUGLAS GUTHRIE.

On Rupture into the Ventricle. A. HERRMANN. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 141-6.)

In a short article the author argues that abscesses of the brain do not generally rupture into the ventricle, as is so often stated in case histories. It is far more often the case that the *distended ventricle bursts into the empty abscess cavity.* After the abscess has been emptied by operation, the pressure in the cavity is nil, but it remains high in the ventricle due to excess of cerebrospinal fluid. The weakened partition may give way and a sudden flow of cerebrospinal fluid appears. This may happen when the dressing is changed and such cases have recovered on rare occasions ; they should not be described as " rupture into the ventricle ".

The extent of the abscess cavity and its relation to the ventricle, if any, can be demonstrated by filling the cavity with iodipin and taking X-rays with the head in various positions. In the photographs one recognizes three layers : the heavy iodipin below, then a layer of pus, and above that air.

It is very important to bear in mind the increased pressure in the ventricle in relation to the cerebral abscess cavity. *After* the abscess has been opened, one should do lumbar puncture freely in order to diminish the pressure in the ventricle. In this way it may be possible to prevent this very fatal complication of bursting of the ventricle into the abscess cavity.
J. A. KEEN.

Cholesteatoma of the Skull. W. LOEPP. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 65-78.)

The author describes two cases of *primary congenital cholesteatoma.* One was in the region of the left frontal bone with erosion of the roof of the orbit and a part of the greater wing of the sphenoid ; the other case was a more centrally situated brain tumour near the base of the third ventricle. Both were instances of primary cholesteatoma due to the inclusion of epithelial rests. In the skull bones these tumours usually begin near the bony suture lines. In another case cholesteatoma was diagnosed, as the X-ray appearances were typical (see illustrations), but at operation the tumour was found to be a glioma.

Congenital cholesteatoma can also occur in the temporal bone and in these very rare cases the tumour has no relation to the tympanic cavity unless a connection is established secondarily.

The pathology of the ordinary kind of cholesteatoma is also discussed along the usual lines. The special interest of the article lies in the detailed analysis of the X-ray appearances and of the

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special points which enable one to distinguish cholesteatoma from simple arrest of pneumatization, and from carcinoma.

J. A. KEEN.

Cavernous Sinus Thrombosis of Otitic Origin. Report of a case. J. G. GILBERT. (*Laryngoscope*, 1933, xliii., 825.)

A woman, aged 43, who had had a nasal discharge for "several years" and a discharge from the right ear for five months, with earache for "several weeks" and a right-sided headache for one week, was admitted to hospital with œdema of both upper lids, bilateral proptosis, and bilateral limitation of ocular movement. All signs were more marked on the right side. The left fundus was normal, but the right disc was blurred and the retinal veins were engorged.

There were polypi in both nostrils, but no evidence of any recent exacerbation.

There was a high anterior perforation of the right drum, with foul discharge and acute tenderness over the right mastoid. The temperature was up to 103° F. Pressure on the left jugular vein raised the pressure of the cerebrospinal fluid to 55 mm., pressure on the right jugular had no effect.

Operation showed a lateral sinus thrombosis below the entrance of the superior petrosal sinus. The emissary vein was thrombosed. The patient's temperature rose to 107° F. after operation and she died on the next day. Unfortunately no autopsy was permitted. The writer's comments are as follows:

"It is unfortunate that an autopsy was not obtained. However, it was felt that we were dealing with a case of cavernous sinus thrombosis because of the history, the physical findings, and the operative findings. The most probable route of the infection to the cavernous sinus was from the aural disease on the right side by direct extension from the lateral sinus through the inferior petrosal sinus. The paranasal sinuses were discarded as an ætiological factor after the mastoid operation." The following facts were significant:

1. The history of a discharge from the right ear for five months accompanied by headache on the same side for several weeks. This was associated with exquisite tenderness over the mastoid process.
2. The Tobey-Ayer test was positive.
3. The X-ray findings indicated destruction of bone.
4. The finding of pus in the mastoid process, an erosion of the sinus plate, and a sigmoid sinus thrombosis, with free bleeding from above and none from below.

Although study of the X-ray disclosed disease of both ethmoidal areas, there was no evidence of an acute process in the nose. The

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operative findings were too definite and too significant to be disregarded from the standpoint of ætiology. The findings in this case exclude the carotid venous plexus in either the acute or chronic form as the probable pathway.

The existence, in this case, of an otitis of twenty weeks' duration is of considerable interest. Eagleton reported a case of cavernous sinus thrombosis arising from an ear infection in which the evidence of this condition appeared some eight weeks after the acute illness began. Turner and Reynolds cited a case, previously reported by Fraser and Dickie, of cavernous sinus thrombosis which developed about eleven weeks after the acute onset of otitis media.

Of twenty-two cases of cavernous sinus thrombosis reported by Turner and Reynolds, five (22 per cent.) followed middle-ear disease, while twelve (54 per cent.) had their inception in the paranasal sinuses.

Seven (28 per cent.) of Eagleton's twenty-five cases of cavernous sinus thrombosis followed middle-ear infection, and a similar number and percentage came from the paranasal sinuses.

Smith collected 140 cases of cavernous sinus thrombosis, of which thirteen (9 per cent.) arose from the paranasal sinuses and fifty-six (40 per cent.) from the middle ear.

Brunner has called attention to the fact that in twenty-two autopsies on cases of lateral sinus phlebitis, twelve were found to have had a cavernous sinus thrombophlebitis.

F. W. WATKYN-THOMAS.

NOSE AND ACCESSORY SINUSES

On the relation between ozæna and the cervical sympathetic, as shown by histological findings in the nerve ganglia. P. KRAMPITZ. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 107-18.)

The author favours a theory of the trophic origin of ozæna. We know that the disease is not confined to the nasal mucous membrane, but that it often spreads to the throat and laryngeal mucosa and even into the trachea. A permanent constriction of the blood vessels supplying the parts would account for the atrophic changes. If a focus of irritation of the sympathetic vasomotor nerves could be discovered, this would go a long way towards solving the problem of ætiology.

There have been previous attempts to discover lesions in the sphenopalatine, Gasserian and jugular ganglia (Fleischmann, Vogel) so far with negative results. Dr. Krampitz believes that the trophic influences are more likely to be discovered in the sympathetic nervous system. In order to test his theory he examined the superior cervical ganglion in two cases of ozæna. The removal of the ganglion was planned deliberately as an operation in the hope

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of improving the ozæna, and the technique of the operation is described.

In the first patient it was difficult to judge the end-result because a previous operation had been done on the nose (Hinsberg). In the second case relief was so marked on the operated side that it was decided to remove the superior cervical ganglion on the other side also. The symptoms improved very much as a result of the two operations.

All three ganglia showed foci of inflammation (two illustrations in text). There appears to be no doubt about these findings. Similar small areas of round-celled infiltration have been found in these ganglia in cases of angina pectoris and Raynaud's diseases.

J. A. KEEN.

On Herpes Zoster infection of some cranial nerves with four personal cases. L. SVANTE SVENSON. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 89-106.)

Early in 1932 almost the whole population of Malmö (112,724 persons) were vaccinated in order to prevent an outbreak of smallpox. Among the vaccinated people six cases of encephalitis, and three cases of herpes zoster infection of the cranial nerves (described later in the article) occurred; also many cases of herpes localized elsewhere and some cases of facial paralysis without evidence of herpes. Further, there were an exceptional number of cases of chickenpox.

There must be some relation between these various disease processes. Encephalitis following vaccination is explained as an activation of the virus in persons who are already carriers. Herpes zoster is now looked upon as an infection which enters by the skin (Marinesco) and probably also *viâ* the mucous membranes of the mouth and pharynx. The characteristic vesicles are formed by an action of the unknown virus on the vasomotor nerves. The virus then spreads along the lymphatics of the sensory nerves until it reaches the posterior root ganglia for which it has a special affinity. From there other ganglia may become involved or, in the cranial cavity, the infection spreads to the ganglia of neighbouring nerve trunks, either by way of the numerous anastomoses or by causing a very localized meningitis. The infective theory is proved by the changes in the cerebrospinal fluid which may be quite marked in certain cases.

The symptoms of herpes infection of the cranial nerves are fully described. They are extremely varied and depend entirely on the particular ganglion or ganglion groups which are affected, and on the order in which they become involved. Gastric disturbances with severe vomiting (without vertigo and nystagmus) are explained by an infection of the ganglion on the trunk of the vagus. Herpes

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zoster oticus is a combination of ganglion infection which occurs relatively frequently.

Towards the end of the article the author gives an account of four personal cases which illustrate the various points. Three of them had been vaccinated, one had not. In the last case there was some doubt as to whether the diagnosis should be "zoster cephalicus" or encephalitis. The illness began with catarrhal symptoms in the nose and pharynx. Later severe neuralgic pains occurred over the right side of the head, more particularly localized towards the right ear, with facial paralysis (trigeminus and otic ganglia). Herpetic vesicles were not seen, but they may have been overlooked in the pharynx. Four days later the vestibular ganglion became affected.

J. A. KEEN.

LARYNX

Associated Laryngeal Palsies. F. BÉRARD. (*Les Annales d'Oto-Laryngologie*, April, 1934.)

In order to read this article with understanding, one must first study the French anatomical nomenclature of some of the nerves in question. The "spinal bulbaire" contains the motor fibres to the larynx and to the "hémi-palate". The vagus nerve is a purely sensory nerve of which the auricular, pharyngeal and superior laryngeal branches are those which interest us. The "spinal médullaire" is our spinal accessory and the first part of the article is concerned in describing the effects of lesions of these nerves and those of the IXth, XIIth and sympathetic nerves. After discussing the differential diagnosis between the central and peripheral origin of the lesions, the author proceeds to the consideration of the various associated paralyses. Hemiplegia of the palate and larynx is usually of bulbar origin and is caused either by hæmorrhage or by a softening of arterio-sclerotic or syphilitic origin. Palato-scapulo-laryngeal hemiplegia is rarely seen and is caused, as a rule, by a peripheral lesion due to a neuritis, tumour, or meningeal syphilis. The other associated palsies are briefly referred to.

M. VLASTO.

The anatomical lesions in Bilateral Abductor Paralysis. M. REBATTU. (*Les Annales d'Oto-Laryngologie*, April, 1934.)

The contents of this short paper are based on the *post mortem* findings in two cases of paresis of the abductors due, in one case, to a syphilitic and, in the other, to a typhus infection. In both cases there were inflammatory changes in the area of the bulbar nuclei. The author recalls that in cases of syringomyelia in which the laryngeal dilators are found to be paralysed, the *nuclei ambigui* are always found to be affected.

M. VLASTO.

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Larynx

Causes and Symptoms of Recurrent Nerve Paralysis. R. MADURO. (*Les Annales d'Oto-Laryngologie*, April, 1934.)

It is usual to describe two clinical stages of recurrent laryngeal palsy: (1) an incomplete paresis with the cord in a paramedian position with loss of abduction but preservation of adduction, (2) a complete paralysis in the cadaveric position. In point of fact these cases are extremely rare and the cord usually takes up an immediate and permanent cadaveric position. The characteristics of a paralysed cord are given in detail and are summed up by the statement that the cord is "fixed in an intermediate position, shortened, lowered and thinned". There are undoubtedly a few cases in which a peripheral palsy will reproduce a symptomatology and clinical picture associated with paralysis of the dilators of the glottis, but unilateral in this case. That is to say that the main symptom will be difficulty in breathing, and that the cord will be paramedian in position and non-atrophied. The author proceeds to the differential diagnosis of the condition and stresses the point that in the rare cases in which the fixation of the cord is due to a crico-arytenoid arthritis, there is no falling forwards of the arytenoid cartilage, no lowering of the affected cord, and no attempt at compensation by the unaffected cord. Finally, the author briefly refers to the many pathological conditions which may be the cause of a recurrent laryngeal palsy.

M. VLASTO.

Recurrent nerve palsies and Morbid Affections of the Thyroid Gland. PROF. LEMAITRE. (*Les Annales d'Oto-Laryngologie*, April, 1934.)

The subject is considered from the following viewpoints: (1) Recurrent palsies occurring spontaneously during the evolution of some pathological condition of the thyroid gland. (2) Palsies occurring during surgical interference with the gland. (3) Palsies occurring as a sequela to operations on the gland. We are first given an anatomical description of the recurrent nerves on the two sides and diagrams help to show where they are vulnerable at operation. Although recurrent nerve palsies are stated to occur in simple inflammatory conditions of the thyroid gland, they must be very rare, and the author has not come across them. The cause is usually due to a goitre or, still more frequently, to malignancy. Paralyses occurring during operations are considered from the points of view of when and why they occur and how these accidents can best be avoided. There is an interesting account of an operation during the course of which (under local anæsthesia) an artery clip was placed on a blood vessel and the patient was asked to phonate. The alteration of the voice unmistakably showed that a recurrent nerve had been included with the vessel in the pressure forceps.

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Although the clip was immediately released, the vocal cord has remained permanently paralysed on the affected side. The nerve is nearly always damaged in tying off the inferior thyroid artery, and the ligation of this vessel should be carried out as far as possible from the thyroid gland sheath. That is to say in the sterno-hyoid space, as advised by Cunéo. Paralyses occurring a few hours or even days after the operation are unimportant and pass off. Those that occur at a later period are usually due to cicatricial effects and are much more serious.

M. VLASTO.

On the indications for the active treatment of Tuberculosis of the Larynx. C. AROLD. (*Zeitschrift für Laryng.*, 1934, xxv., 131-4.)

In spite of a stationary lesion in the lung and a comparatively good general condition of the patient, it is sometimes found that active treatment of the focus in the larynx is tolerated badly, and that it produces an aggravation of the condition. On the other hand, there are cases in which the results of active treatment are very good, in spite of a progressive lung condition.

The author finds that the best guide in this problem is the *white cell count*, irrespective of the lung findings. If the active treatment of the tuberculous lesion in the larynx is undertaken at a time when the white cell numbers are improving (as shown by blood-counts at two to three weeks' interval), the results are good.

Another indication concerns the type of the laryngeal lesion. One will more readily decide in favour of active treatment if the focus is limited to one area than in cases with diffuse and extensive ulceration.

J. A. KEEN.

Progressive Malignant Granuloma of the Air Passages. O. VOSS. (*Zeitschrift für Laryng.*, 1934, xxv., 122-30.)

The author describes two instances of a condition characterized by diffuse chronic inflammatory changes in the mucous membranes of the air passages. The mucosa becomes replaced by granulations of a gangrenous type (see illustration in text). The changes begin in the nose and one of the early signs is nasal obstruction, which may become complete on one or other side. Afterwards the whole mucous membrane of the pharynx, larynx, and trachea becomes affected, and it may be necessary to do a tracheotomy. Both patients died after a prolonged illness and no treatment seemed to help.

The literature and differential diagnosis are discussed and such conditions as tuberculosis, syphilis, leprosy, rhinoscleroma, gangosa and mycosis fungoides were carefully excluded. Although it has not been proved that we are dealing with a neoplasm, Professor Voss

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believes that the best name for this rare condition is progressive malignant granuloma.

J. A. KEEN.

Pemphigus beginning in the Larynx. Report of a case. HYMAN DANISH. (*Laryngoscope*, 1933, xliii., 823.)

The author describes the case of a man, aged 65, who had suffered for three weeks from slight, but persistent, pain on swallowing. Examination showed a small, vesicular exudative lesion on the left side of the epiglottis. The Wassermann reaction was negative and so was examination for Vincent's organisms and for tubercle. Five weeks later the exudate spread to the base of the tongue and thence to the right side. Bullae then formed on the palate and faucial pillars. Four months later typical pemphigus lesions appeared on the skin of the face and neck. Ten months later the patient died.

Danish points out that it is important to realize that the first signs of pemphigus may appear in the larynx or mouth weeks, or even months, before any cutaneous lesions are seen.

F. W. WATKYN-THOMAS.

The Control of Hæmorrhage in Laryngo-fissure. G. ÖHNGREN. (*Acta Oto-Laryngologica*, xix., fasc. 4, 1934.)

The technique of laryngo-fissure may not be considered difficult but now and again bleeding complicates the operation, and St Clair Thomson and Colledge have pointed out that so much time may be spent in arresting hæmorrhage that the whole operation takes twice as long.

The author finds that after preliminary ligation of the internal laryngeal artery he has been able to carry out the procedure of laryngo-fissure with greater ease. This vessel does not always arise from the superior thyroid artery but may have an independent origin from the external carotid, or an origin common with the hyoid artery. Sometimes the laryngeal artery is double, one branch then arises from the superior thyroid and one directly from the external carotid, both entering the larynx together. If, therefore, it is decided to tie the internal laryngeal artery to minimize bleeding in the operation of laryngo-fissure, it should be done at the point at which the artery perforates the thyro-hyoid membrane.

Several lipiodol injection pictures are shown to illustrate the distribution of the internal laryngeal and superior thyroid arteries, and five cases operated upon for intrinsic laryngeal cancer are described in which the author tied the internal laryngeal artery before opening the larynx. He states that after retracting the thyro-hyoid muscle it is not difficult to find the vessel.

H. V. FORSTER.

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Abstracts

TONSIL AND PHARYNX

Treatment of Peritonsillar Abscess: simple incision, secondary tonsillectomy or abscess-tonsillectomy? A. LINCK. (*Zeitschrift für Laryng.*, 1934, xxv., 79-93.)

Dr. Linck strongly advocates enucleation of the tonsils in the acute stage. The main arguments in favour of the procedure are as follows: In the commonly practised *incision of the abscess* drainage is unsatisfactory, the operation may have to be repeated, and complications are not eliminated. *Secondary tonsillectomy* after an interval introduces the difficulty of deciding how long to wait. Latent abscesses are sometimes opened up and the inflammation may spread into the neck tissues. It is then argued that one did not wait long enough and it is pointed out how dangerous an operation in the acute stage would be, when serious complications may arise even several weeks later.

This argument is quite wrong, according to the author. Enucleation of the tonsil in the presence of an acute abscess ("*abscess tonsillectomy*") is a very safe operation in actual practice. It provides absolutely free drainage, the source of trouble is completely removed at once and the patient has to have only one operation.

In the Greifswald Clinic some 280 cases have been treated in this way and the results have been very satisfactory. Abscess tonsillectomy is performed irrespective of the stage of the inflammation. The operation is surprisingly easy, as the tonsil is already partially detached from its bed. It is done under local anæsthesia and the after-pain is much less than that of interval tonsillectomy.

Many laryngologists now practise this method and more and more evidence is accumulating to show its safety and advantages (see references). Dr. Linck anticipates the time when all complications such as generalized sepsis, thrombosis of the jugular veins, and fatal hæmorrhage from erosion of the large vessels will become unknown due to the general adoption of tonsil enucleation in the acute stage. He believes that partial resection of the tonsil, e.g. upper pole only, as recommended by Canuyt, is wrong. It has no advantage over simple incision and unopened pockets often remain behind.

J. A. KEEN.

Tuberculosis of the Pharynx. DR. L. DE REYNIER. (*Revue de Laryngologie*, etc., September, 1933.)

(1) Tuberculosis of the mouth and lower pharynx is always a grave affection, and often fatal.

(2) Primary tuberculosis of the pharynx is rare. It is nearly always secondary to tuberculosis of the lungs, bowels, or kidneys. When no other tubercular foci are present the prognosis is good, and the local treatment should be carried out energetically.

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(3) The progress of the ulcerations in secondary lesions of the pharynx and their response to treatment gives a good indication of the progress of the disease elsewhere, and of the power of the tissues to resist the invasion of the disease.

(4) When the progress of ulceration is slow, the lesions will often heal under treatment, but recurrences are frequent. The prognosis as to life is generally favourable, but a sudden general spread of tubercle sometimes occurs.

With regard to treatment, climatically, high altitudes are beneficial, but residence near the sea is altogether contraindicated. Subcutaneous injections of camphorated oil (20 per cent.) are useful. Local treatment of the ulcers is very necessary " because, for our part, we have never seen tubercular lesions of the mouth and lower pharynx heal spontaneously, without treatment ".

" In the case of painful ulceration, touching the surface with lactic acid, or para-mono-chloro-phenol, which destroys the nerve endings, has always given considerable relief to pain in cases observed by us." In some cases insufflation of powders, or sprays of watery or oily solutions of cocaine, anæsthetin, orthoform, percaine, etc., and, finally, morphia in large doses may be necessary to allow the patient to swallow and to sleep. In the case of chronic ulcerations, galvano-cautery puncture, or the applications of caustics as indicated above, will not only give relief, but may lead to the healing of the ulcers. The difficulty is to decide how often to apply these measures. Each application incites a transient increase of dysphagia, which is followed by a long period of relief. The practitioner should be guided largely by the patient's complaints of pain. As soon as the dysphagia begins to increase, another cauterization should be made. The galvano-cautery is, on the whole, the most useful. Exposure of the lesions to direct rays of the sun, or to ultra-violet light through the open mouth for periods of from five minutes to half an hour, is also useful. He has not found any advantage in the use of gold salts.

G. Wilkinson.

MISCELLANEOUS

The Treatment of Cancer by Chlorophyll. J. David-Galatz. (*J. de Laryngologie*, etc., Sept., 1933.)

The hypothetical reasoning on which this treatment is based is admittedly speculative. Baldly stated, it is, roughly, as follows: Chlorophyll is known to have the property of absorbing the energy of the sun's radiations and utilizing it for liberating oxygen from the CO_2 molecule, and for building up a more complex carbohydrate molecule. It is conceivable that this substance, if applied to or introduced into the human body, might be able to utilize radiant

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energy so as to produce constructive chemical changes in the cells of the tissues, thus altering their metabolism. It is, further, conceivable that such chemical changes, should they occur within the cells of a cancerous growth, might influence their activities in such a way as to restrain their excessive reproduction.

To test this supposition in the most simple and direct manner possible, the writer began by applying a paste of chlorophyll to a primary epitheliomatous ulcer of six months' duration on the face of a woman of 64. She was kept as much as possible in the sunlight. The ulcer healed after four applications of the paste (each of twenty-four to forty-eight hours' duration). There has been no recurrence after two years. He states that he has treated "a series" of skin cancers in the same way. The good results obtained encouraged him to apply the chlorophyll treatment to cases of internal cancer which presented themselves in his department. All the cases treated were very advanced, and beyond surgical aid. He had sterile solutions of chlorophyll prepared, which he injected intravenously, starting with 1 c.cm. and increasing the dose by 1 c.cm. at each injection up to 5 c.cm., thirteen injections in all being given. Directly after each injection applications of X-rays were made to the spleen and long bones once every three days, the dose to the spleen being R1,000 distributed over three fields, filtered through 5 mm. aluminium and R1,500 to the long bones. The patients all experienced great improvement in general health and appearance, and there was notable diminution of the pain. Brief notes of five cases are given. (1) Inoperable cancer of the deep pharynx and larynx, wearing a tracheotomy tube. Since treatment has continued at work, and has been in much improved health for two years, in spite of massive growth in the pharynx. (2) Recurrent fungating mass of cancer in the stump of an amputated tongue. Great improvement after treatment. The pain disappeared and the patient was able to swallow. Treatment was repeated at the end of six months. The patient has remained moderately comfortable for one year. (3) Epithelioma of the left middle ear and naso-pharynx. Extreme neuralgia in the left Vth nerve. The tumour disappeared after a course of treatment and the general health greatly improved. Improvement maintained when last seen six months later. (4) Epithelioma of deep pharynx and larynx of two years' duration, previously treated by X-rays without improvement. There was great improvement after a course of chlorophyll cum X-rays, maintained up to six months later, when last seen. (5) Epithelioma of pyriform fossa and base of tongue, requiring emergency tracheotomy. This patient was extremely ill. Great improvement followed a course of chlorophyll X-ray treatment, and this improvement was maintained when last seen one month later.

G. Wilkinson.

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Miscellaneous

The Present Status of Biopsy. A. B. McGraw and F. W. Hartman. (*Jour. A.M.A.*, Oct. 14th, 1933, ci., No. 16.)

Biopsy strictly includes the removal of any tissue from a living subject for diagnostic examination, but custom tends to confine it to the examination of tumour tissue suspected of malignancy. It is our best means of determining the histogenesis, classification, activity, and prognosis. The evidence that incision of a malignant tumour stimulates local growth is not very convincing. F. C. Wood found no more metatases in biopsied rats than in those whose tumours were excised on the day that biopsy was made. However, Knox and Tyzzer have shown that massage of rat tumours greatly increases the incidence of metastases. Advances in methods of rapid sectioning and staining have taken place. Biopsy should never precede or replace other clinical methods of diagnosis but should rather supplement them. Co-operation between the surgeon and the pathologist is essential. The arbitrary attitude of some surgeons that pathology is a mathematical science in which any trained technician can find the correct answer makes the work of the pathologist unpleasant, unscientific, and often inaccurate. The various endoscopic instruments have made biopsies from the larynx, œsophagus, and other internal organs possible but, on account of the small amount of material obtained, have added to the troubles of the pathologist. The needle puncture method of Martin and Ellis and the punch biopsy of Hoffman are helpful in obtaining tissue from deep-lying growths without a cutting operation. The cautery loop may be used in place of the knife but distortion of tissue by heat must be avoided. The complete and wide removal of the growth is preferable to biopsy. Every biopsy should be conducted with the greatest precision and the strictest asepsis. A clear description of the source of the growth, its relation thereto, and the method by which it was obtained, should be sent to the pathologist. The work of Broders, Ewing, Regaud and Lacassagne tends to show that an adequate morphological study of a tumour will indicate its histogenesis and degree of malignancy, including metastasizing power and radiosensitivity.

Angus A. Campbell.

Observations on the Relationship of the Virus of Human Influenza and Dog Distemper. Adolph Eichorn and Norman J. Pyle. (*Jour. A.M.A.*, June 23rd, 1934, cii., No. 25.)

The writers review and confirm the work of Smith, Andrewes and Laidlaw, who showed that bacteria-free filtrates taken from the throat washings of influenza patients produced a similar disease in ferrets. A series of eleven ferrets were previously given nasal instillations of influenza virus and later subjected to injection of canine distemper virus in amounts that always proved fatal to

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susceptible animals. Of the eleven, four remained well and all that died showed a marked delay of the distemper symptoms when compared with control animals. The writers feel that the influenza virus induces some immunity in ferrets against distemper virus and that there is some relationship between the two viruses. It is hoped that further experiments now in progress will clarify our knowledge with regard to these viruses.

ANGUS A. CAMPBELL.

Angio-neurotic Œdema of the Upper Air Passages. PROF. VERNIEUWE. (*Journal de Laryngologie*, etc., July, 1933.)

This is an excellent short review of the literature of this alarming, and often serious malady, illustrated by very striking photographs of a case of the writer's, taken during and after an attack.

The characteristic symptom is the sudden appearance of localized areas of œdema ranging in size "from a hazel-nut to the palm of the hand". Certain constitutional symptoms, such as shivering, vomiting, or rise of temperature may occur, but are not constantly observed. It is essentially a disease of a single symptom. The œdema has a curious predisposition to recur in the same situations in individual patients. Hereditary predisposition is strongly marked, and a marked predilection for certain sites may be present in members of the same family. When it attacks the tongue and the larynx, the dyspnœa is often alarming or dangerous. "Twice I have seen Quincke's œdema threaten to cut short the life of the same patient. On the first occasion the tongue was swollen to such a degree that the mouth could scarcely contain it. The œdema disappeared next day from the tongue, but the scrotum was swollen to the size of a child's head. Some years later, the patient had an attack of œdema of the larynx. I have also been the impotent witness of the last convulsions of a patient asphyxiated by laryngeal œdema, the tongue completely tamponnading the mouth." Death, though not frequent, is not exceptional. Mendel records eleven cases of acute œdema spread over three generations of the same family, with six deaths from laryngeal obstruction. Whiting has collected 110 cases of familial œdema, with thirty deaths.

Treatment is ineffective. Protein desensitization has proved disappointing. Ephedrine is the only drug which the writer has found of use.

G. WILKINSON.

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