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Pathologist's report (Dr. R. C. Matson):—"The sections from the tumour (see Fig. 8) show a high degree of cellularity. The great majority of the cells are round cells, sarcomatous in nature, and these constitute the bulk of the tumour. A striking point is the number of more or less round cells filled with melanin, and this pigment is not only confined to the cells, but has overflowed into the surrounding connective-tissue stroma.

It is a melanotic sarcoma, and for lack of evidence to the contrary, the pigment must be assumed to arise in the tumour itself."

Tracheotomy eleven years ago for Healed Laryngeal Tuberculosis, with Ankylosis of Cords: further report on case previously shown.—ELEANOR LOWRY.

Female, aged 57. Shown at a meeting of this Section in *March*, 1922, with the question of diagnosis. She had severe attacks of dyspnoea with inability to abduct the cords. The cords were thickened posteriorly. Tracheotomy was performed in *April*, 1922. A piece of thickened tissue was removed from the right cord, and found not to be malignant.

She was found to have old pulmonary tuberculosis, apparently healed, and no tubercle bacilli could be found in the sputum. There has been no dyspnoea since and the condition of the cords appears as in 1922.

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Nystagmus alternans. G. CANTELE and K. GRAHE. (*Arch. Ohr-, u.s.w., Heilk.*, 1933, cxxxvii., 174-86.)

A nystagmus which alters its direction periodically is an extremely rare condition (see references). The authors describe three such cases giving the vestibular tests in full. In one case the alternating nystagmus was observed only with certain tests, viz. with the cold caloric test on both sides and the warm caloric test on the left side. The other two patients had spontaneous alternating nystagmus which had existed some five years in one of them; in the other case the duration was uncertain.

The pointing tests were specially investigated in these subjects. It was found that the deviation of the finger-pointing was only partially influenced by the periodic alteration in the direction of the nystagmus.

J. A. KEEN.

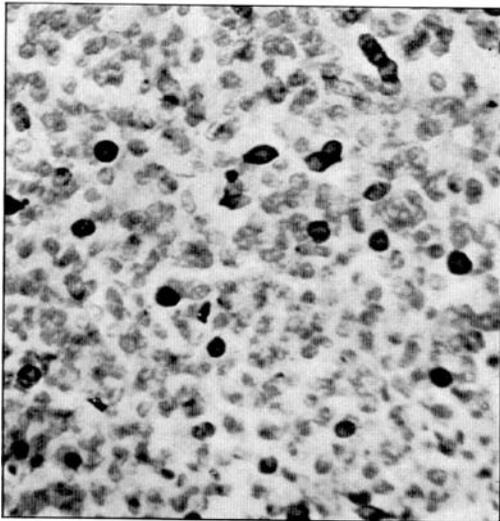


Fig. 8.
Melanotic sarcoma of the nose.

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The Auditory Ossicles in X-ray Photographs. F. H. TER HEEGE.
(*Arch. Ohr-, u.s.w., Heilk.*, 1933, cxxxvii., 367-73.)

The author describes a special method of X-raying the isolated temporal bone and of demonstrating the malleus and incus after applying a little white lead paint to the ossicles separately and to the walls of the tympanic cavity. There are several excellent illustrations in the text, with diagrams. When the method is applied to patients a simple framework made of aluminium is needed. This enables one to get the accurate angle quite easily.

J. A. KEEN.

The Bony Labyrinth Capsule of Rodents. K. HAFNER. (*Arch. Ohr-, u.s.w., Heilk.*, 1933, cxxxvii., 282-305.)

This is a lengthy and very complete histological study of the labyrinth capsule in rabbits, guinea-pigs, mice and rats, with many illustrations in the text. The author wished to ascertain to what extent conditions in these animals resembled the human labyrinth.

Dr. Hafner found many points of resemblance in the bony labyrinths of rabbits and guinea-pigs, especially as regards the fibrillary structure of the bone. Both these species are therefore suitable for experiments in the study of many clinical problems. On the other hand, the structure of the bony labyrinth in mice and rats shows certain essential differences from the microscopic appearances in the human labyrinth, and these animals are less suitable for laboratory experiments.

J. A. KEEN.

X-ray changes in the Temporal Bones in two cases of Schüller-Christian Disease. A. GREIFENSTEIN. (*Z. Laryng.*, 1934, xxiv., 384-91.)

A typical case of Schüller-Christian disease is characterized by the following triad of symptoms: defects in the skull bones, exophthalmos and diabetes insipidus. It is a form of generalized xanthomatosis. The temporal bones and the inner ears are not infrequently affected. The patients may complain of deafness and vertigo, and the otologist must therefore be familiar with the condition.

Of the skull bones, the parietal and temporal are most often affected. By repeated X-rays one can observe the slow spread of the xanthomatous deposits which show as clear areas (six illustrations in text). In rare cases yellowish granulations have broken through into the bony meatus and the nature of the disease has then been clearly established.

After a time the xanthomatous deposits tend to disappear. In some cases they are replaced by newly-formed bone of the hard

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ivory type. In other cases fibrous tissue takes the place of the tumours and an X-ray photograph may suggest the formation of a fresh focus.

J. A. KEEN.

On Psoriasis of the Tympanic Membrane. H. LEICHER.
(*Z. Laryng.*, 1934, xxiv., 393-6.)

Psoriasis of the pinna and the external auditory meatus is not infrequent and the skin lesion has the same characteristics as psoriasis in other parts of the body. Instances of a spread of the lesion on to the tympanic membrane seem to be extraordinarily rare, as Leicher was unable to find any reference to this condition in otological literature. He himself observed and studied three such cases and describes minutely the special clinical problem which arises.

It is very difficult to remove the scabs from the tympanic membrane. Strong ointments like chrysarobin must be avoided, as a perforation into the middle ear can be made. The author recommends a certain "radioactive" ointment which is packed into the meatus in contact with the drum membrane for two to three days. The ointment is then removed and the meatus gently syringed with warm water. Some of the softened scales may be picked off with a fine forceps. If necessary the meatus must be packed again with the ointment. When the large psoriasis scale is ultimately lifted from the tympanic membrane this may present a normal appearance at once.

In two of the author's cases spontaneous perforations arose. These healed quickly and the tympanic membranes became normal. Recurrences and spontaneous disappearance of the lesions are characteristic features, as in psoriasis elsewhere.

J. A. KEEN.

A Rare Tumour of the Ear Lobule in a Child. G. CLAUS.
(*Z. Hals-, u.s.w., Heilk.*, 1934, xxxv., 212-18.)

A little girl, aged $2\frac{3}{4}$, was found to have an enlarged ear lobule on the left side (see photograph) with no other symptoms. A partial excision of the tumour and microscopic analysis gave the following diagnosis: *lymphadenosis cutis circumscripta*. The swelling was the first sign of a lymphatic leukæmia, a condition which is extremely rare in children.

At first the blood picture was normal. After the histological diagnosis had been made, the child was put on arsenic over a long period. Under this treatment the swelling of the ear lobule disappeared completely, but in the course of a year (November, 1933) the lymphocyte count gradually increased and other signs of lymphatic leukæmia became manifest.

J. A. KEEN.

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Discussion on Otosclerosis at the Second International Oto-Laryngological Congress at Madrid in September, 1932. E. CHARSHAK. (*Acta Oto-Laryngologica*, xix., fasc. 3.)

This paper, as its title implies, consists mainly of a résumé of the proceedings of the Congress, so far as they were concerned with otosclerosis. The author gives, in the course of some seventeen pages, a fairly comprehensive account of present-day views of the nature of otosclerosis, and of what has been done to discover an effective treatment. The paper is not suitable for a short abstract, but may be recommended to those who desire to have the results of recent work on the subject in a convenient form.

THOMAS GUTHRIE.

The Tactile Sensibility of the skin of the External Auditory Meatus.

E. L. KRISTUL. (*Acta Oto-Laryngologica*, xix., fasc. 3.)

Hartmann, Jürgens, Fröschels and others have already drawn attention to the varying sensibility of the skin of different parts of the outer ear, and particularly to the changes in sensibility met with in certain ear conditions, such as otosclerosis and deaf-mutism.

As, however, there appeared to be a lack of agreement among previous observers, the author tested the tactile sensibility of the meatal skin of a large number of patients by means of a camel hair brush or a goose-feather, and reached, amongst others, the following conclusions :—

(1) In at least two-thirds of the persons examined, the posterior inferior wall of the cartilaginous meatus was the most, and the upper wall, especially of the bony portion, the least sensitive. Isolated areas of greater or lesser sensibility could often be detected, particularly in the cartilaginous part.

(2) Age plays an important part. The meatal skin is relatively insensitive in early life and after sixty years of age.

(3) The sensitiveness is altered during various general diseases. It is diminished during typhoid fever, and almost always increased during cerebrospinal meningitis; less often is this the case in anæmia, chlorosis and leukæmia.

(4) Extirpation of the Gasserian ganglion causes loss of sensation affecting the whole of the external ear with the exception of the part of the pinna supplied by the posterior auricular branch of the facial nerve.

(5) There is marked loss of sensitiveness of the meatal skin in 50 per cent. of cases of primary otosclerosis and in many cases of congenital syphilis, uræmia and diabetes.

(6) Hysterical subjects often have periods of diminished sensibility, persisting for weeks or months. In neurasthenia, on the other hand, sensibility is usually increased.

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(7) The degree of sensibility is partly dependent on the condition of neighbouring organs, especially those supplied by the fifth nerve. Thus acute, or less often, chronic disease of the maxillary antrum sometimes causes increased sensitiveness of the meatal skin, which disappears after healing has occurred, and the same is true of dental caries or alveolar periostitis.

THOMAS GUTHRIE.

Meteorological Instability Layers and Catarrhal Diseases of the Ears and Upper Air Passages. E. WIRTH and HANS LAUCHHEIMER. (*Acta Oto-Laryngologica*, xix., fasc. 3.)

In place of the atmospheric currents of low and high pressure of the older nomenclature, modern meteorology deals with air masses, whose movements are in well-defined directions, for example, the Polar, from East to West: and the Tropical, from West to East. Where the two masses impinge on one another a layer of atmospheric instability is formed—not merely a boundary line, but an air-zone several kilometres wide, discontinuous, irregular, and broken, which manifests itself by definite weather changes, such as rise or fall of temperature, fall in the barometric pressure, precipitation of snow or rain, etc.

De Rudder and others have claimed the existence of a causative connection between the passage of the atmospheric instability layers and catarrhal diseases (Erkältungskrankheiten) of the upper air passages. The authors of this paper have endeavoured to trace such a connection by comparing their records of all the cases attending their Clinic during the year 1929, with specially constructed weather curves for that year. It was found that the cases of catarrhal disease tended to appear in groups, and that these did often show a coincidence in time with periods of meteorological instability. But such conditions as cerumen and external otitis, which almost certainly have really nothing to do with meteorological instability, showed very nearly the same relations. A causative connection, therefore, between weather conditions of this sort and catarrhal disease of the ears and upper air passages must be regarded as very doubtful.

THOMAS GUTHRIE.

Review on Some Recent Papers on Hearing

Zur Theorie des Hörens. GEORG V. BÉKÉSY. (*Physikalische Zeitschr.*, Heft. xviii. and xix., S. 824 and 857.)

The writer of this article approaches the subject of the theory of hearing by the investigation of the sense of direction of sound as perceived by the two ears simultaneously. By means of a complicated piece of apparatus devised by the writer, sounds can be

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conveyed to both ears simultaneously in such a way that variations in loudness, quality and phase may be changed as the investigator desires. It was found that variations in these factors conveyed to the listener the impression that the direction from which the sound came varied accordingly.

An attempt is made to establish an analogy between the sound-picture created in our minds by the sense of hearing and the visual image created by the sense of sight. If the sound is heard equally loudly in both ears then we are aware of the fact that it is either directly in front or directly behind, and we can by voluntary effort convince ourselves that it is in either of these positions. The writer considers that this phenomenon is analogous to that in vision which occurs when we look at a drawing of a truncated cone. We can by a mental effort, see the cone as though its truncated end was either nearer to or further from us than its base, as we choose. Analogies between the physiology of vision and that of hearing are permissible under certain conditions, but that just described appears to be rather fanciful.

Applying the same instruments with some additional apparatus, the investigator has studied the effect of exhaustion of the sense of hearing upon the direction of sound.

ALBERT A. GRAY.

Ueber den Knall und die Theorie des Hörens. GEORG V. BÉKÉSY.
(*Physikale Zeitschrift*, Heft xv., S. 577-82, 1933.)

In this paper the investigator relates some experiments upon the effects of a momentary sound such as a report or sudden crack upon the chain of ossicles and the basilar membrane. The sound employed was that produced by the contraction of the tensor palati muscle. Several individuals selected for the experiments learnt, without much difficulty, to produce a contraction of this muscle without at the same time performing the act of swallowing. The movements of the tympanic membrane were reproduced by means of an oscillograph. By this means the author claims to have ascertained the proper tone of the tympanic membrane and finds that his results are in close approximation to those obtained by Franke, who experimented on the tympanic membrane in the dead body.

The remaining portion of the paper is devoted to the effect of sound upon the basilar membrane, the experiments being similar to those described in the accompanying review of the same author's paper *Sur la Théorie de l'Audition*, but in the present paper he applies his experiments to both ears simultaneously. The object of the author's investigations is to prove that the sensation of sound is produced by progressive waves traversing the basilar membrane, and not by stationary waves. But the conditions under which such

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experiments can be carried out are so widely different from natural conditions, that the results obtained cannot be regarded as at all satisfactory.

ALBERT A. GRAY.

Sur la Théorie de l'Audition. GEORG V. BÉKÉSY. (*L'Année Psychologique*, 1930.)

The writer of this paper, besides reviewing the various theories of hearing, describes some experiments made by himself concerning the subject. In neither of these respects is he very successful in his efforts. The work done by many observers in this country is completely ignored, but to this continental lack of recognition we are, of course, accustomed. This portion is valueless. The other portion deals with his own investigations, and is interspersed with some imposing mathematical equations. The equations may be correct in themselves, but since the quantities they represent are for the most part either conjectural or wholly wrong the results cannot be regarded as very satisfactory. A glaring example of this ignorance of the facts is seen in the attempt to determine the movements of the basilar membrane in response to sound vibrations. In the equation which he uses to ascertain this, the length of the membrane and the density and coefficient of friction of the fluid are stated, but he ignores the factor of tension by the ligamentum spirale, which happens to be the most important of all.

For the purpose of studying the movements of a membrane similar to but larger than the basilar membrane, the investigator constructed an instrument which appears to differ in no way from Wilkinson's, except for the fact that the basilar membrane is represented by a thin membrane of rubber instead of the much more correctly devised membrane in Wilkinson's beautifully constructed instrument. Since the basilar membrane is traversed by fibres running from the ligamentum spirale to the limbus, it is clear that a membrane such as rubber, equally tense in all directions, cannot be employed to represent the basilar membrane.

In one of his experiments the investigator removed the bone surrounding one turn of the cochlea without injuring the membranous wall of the latter. The hole thus made was sufficiently large to let him inspect directly one-third of the basilar membrane and observe its movements. It does not occur to him that such an opening in the otherwise rigid wall of the cochlea so completely alters the physical conditions that the conclusions drawn are valueless.

The object of the investigator is apparently to prove that the organ of Corti is stimulated by progressive waves passing up the ductus cochlearis, rather than by stationary waves, as is most commonly accepted. He is not convincing.

ALBERT A. GRAY.

Nose and Accessory Sinuses

NOSE AND ACCESSORY SINUSES

A Discussion of Cardiac, Pulmonary and other conditions secondary to Chronic Nasal Sinus Infection. JOHN B. POTTS. (*Annals of O.R.L.*, 1933, xlii., 1,002.)

It is in the chronic type of sinusitis, either purulent or hyperplastic, that an effect in general systemic disease is most often found. In the frankly purulent type of sinusitis, drainage is generally all that is required, but in the hyperplastic type, the infection is buried and there may even be abscesses in the thickened mucosa. In cases such as these mere drainage is not sufficient and the thickened mucous membrane must be removed entirely, preferably in one piece. This is most easily done in the maxillary sinus and can also be carried out in the frontal sinus, but is less easy of accomplishment in the ethmoidal and sphenoidal groups.

The importance of removing the membrane in one piece by careful dissection is stressed by the author, and curettage is condemned, because, by the first method a very thin layer of vascular tissue is left over the bone, which assists in healing and may possibly protect against osteomyelitis.

In the after treatment, no packing or antiseptics are used, and irrigation is carried out on one or two occasions only, to remove blood clot or débris.

Unfortunately only seven case reports are given to illustrate the type of conditions treated, but the author summarizes as follows :

“ Our experience has been that bronchial conditions usually respond well.

“ Arthritis, neuritis and allied conditions, except multiple arthritis and arthritis deformans, usually respond favourably.

“ Cardiac response is good.

“ Facial neuralgia, chronic headache, tinnitus, vertigo and ocular infections are often completely relieved.

“ Patience and study in the field of medicine yield many satisfactory results both to the rhinologist and his patient.”

E. J. GILROY GLASS.

On the correction of “ Saddle-nose ” with special reference to the implantation of ivory. G. CLAUS. (*Z. Hals-, u.s.w., Heilk.*, 1934, xxxv., 198-211.)

Two kinds of material are used in plastic operations for a depressed bridge of the nose : autoplasmic, e.g. pieces of bone or cartilage obtained from the patient's ribs or tibia, and alloplastic. The most frequently used alloplastic material is ivory.

A case is described in which the ivory implant remained in place for ten years. The patient then had an attack of erysipelas ; a

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swelling remained behind over the implant and it was necessary to remove it. An X-ray taken before the operation showed that the piece of ivory had undergone considerable erosion. These changes could be studied more carefully after removal (see illustrations in text). Fine granulations had penetrated the piece of ivory from all sides and had split it up to a large extent.

The author then reviews a series of fifty-one similar cases and discusses the special difficulties of the operation. In about 25 per cent. of the patients the ivory graft had to be removed again for various reasons, e.g. secondary inflammation, slipping of the implant. A very common cause of trouble is scar contraction near the tip of the nose. At first the ivory splinter lies in good position under the skin and parallel to its surface. In the course of months or sometimes years, scar contraction at the lower end tilts the graft in such a way that the upper edge presses on the skin from the inside and pressure-necrosis may occur. In the text there is a photograph of a patient with such a small ulcer, the upper end of the white ivory implant is just showing.

When the graft has to be removed subsequently it is not always eroded as in the first case. There are instances on record in which the piece of ivory was practically intact after seventeen or eighteen years. X-ray photographs of the nose taken sideways show very clearly whether the ivory implant is in good position or whether it has moved, also whether it is remaining intact or is becoming eroded.

J. A. KEEN.

LARYNX

Observations on the Movements and Tones produced by the "Polsterpfeife" with reference to the Human Voice. H. GUTZMANN. (*Z. Laryng.*, 1934, xxiv., 401-25.)

The "Polsterpfeife" is a special type of artificial larynx designed by Wethlo (see illustration) in which the vibrating reeds are small cushions (Polster) which resemble the vocal cords more closely than the usual thin bands or edges of membranes. The vibrations of the vocal cords occur in two directions, up and down and sideways. The main difference between the artificial cords and those in the living larynx lies in their fixation. In the artificial larynx both ends are fixed, in the living one only the anterior ends.

The very complex nature of the vocal cord vibrations is due to the fact that the cords themselves can alter their shape. Many diagrams in the text illustrate this peculiarity which cannot be imitated in the artificial larynx.

The tension of the cushions which represent the vocal cords is regulated by means of a current of air blown into each cushion

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separately from the outside. In the living larynx the tension is regulated by a concentric contraction of the *musculus vocalis*. There is a table showing the relations between the pressure on the sides of the cushions, the air-pressure in the inlet pipe and the pitch of the tone which is produced.

Other problems discussed are : The rôle of mucus covering the vocal cords, which can be imitated in the artificial larynx by using mucilage of tragacanth. The relation between pitch and timbre, again with tables showing the requisite pressures. The so-called Johannes Müller law of the compensation of forces in the larynx.

Further, the author describes certain experiments which enable one to study pathological conditions. e.g. "singers' nodes" can be imitated in the artificial larynx; also, by using unequal air-pressures in the two cushions one can study unilateral paresis and paralysis.

Lastly, there is a phonetic analysis of the tones produced in the artificial larynx, using the curves obtained on a Frank's capsule, and many of these are illustrated in the text. These curves are compared with the tone-curves obtained from the voices of trained singers.

J. A. KEEN.

A case of Displacement and Narrowing of the Larynx caused by Spondylitis Deformans and Scoliosis of the Cervical Vertebral Column. M. HAMBRAEUS. (*Acta Oto-Laryngologica*, xix., fasc. 3.)

The patient was a woman, 79 years of age, who had noticed increasing hoarseness for one and a half years, and complained also of shortness of breath and stridor on exertion. The cause was found to be a displacement and compression of the larynx, due to spondylitis deformans of the cervical spine, with marked prominence of the bodies of the 4th to the 6th cervical vertebrae. This prominence lay exactly on a level with the larynx, and (1) caused a displacement of the entire larynx forward and to the right, and a slight rotation to the left; and (2) compressed the larynx, so as to displace the left arytenoid and vocal cord and thus cause narrowing of the glottic opening.

As the compression was exerted on the comparatively unyielding larynx, the narrowing was less than if it had been applied immediately below the larynx to the compressible tracheal cartilages.

It was remarkable that the patient experienced no difficulty in swallowing, especially as the X-ray examination showed a moderate degree of pharyngeal paresis. This absence of dysphagia was probably due to the fact that the oesophagus was pushed over to the left, and its lumen remained comparatively free.

THOMAS GUTHRIE.

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TONSIL AND PHARYNX

Experiments on the Function of the Mucous Membranes in the Upper Air Passages. A. HERRMANN. (*Z. Laryng.*, 1934, xxiv., 479-86.)

This is an investigation of the movements of ciliated epithelium in certain animals: (1) In the trachea of pigs shortly after death. (2) In the trachea of dogs under narcosis. Some barium powder was placed near the bifurcation and into the bronchi through a bronchoscope, and the subsequent movements of the barium deposit were studied by X-ray photographs. There are many interesting illustrations in the text.

The action of the cilia was found to be very powerful, especially in the experiments on dogs. After an interval of thirty minutes all the barium had been cleared out of the bronchi and was concentrated in one mass near the glottis. The animals were deeply under the influence of a narcotic drug and there was no coughing. Moreover, the successive X-ray photographs were taken with the dogs in an upright position, so that the cilia had to overcome the action of gravity as well.

J. A. KEEN.

On the Pathology and Clinical Features of Septicæmia following Tonsil Infections. L. HAYMANN. (*Z. Laryng.*, 1934, xxiv., 475-9.)

The pathology of generalized sepsis following tonsil infections is very frequently discussed in German laryngological journals. In the present article this complicated subject is presented particularly clearly.

There are many cases in which the pharynx has shown normal appearances throughout a fatal illness, yet *post mortem* a small abscess is discovered behind one or other tonsil (30 per cent. in the author's series). In Uffenorde's classification, which is probably the best, the cases are grouped according to the manner in which the generalized sepsis has arisen:

(1) Cases with extensive peritonsillar and retropharyngeal changes and phlegmonous inflammation of the interstitial spaces in the neck, often with thrombophlebitis of the large veins.

(2) Cases in which inflammation and suppuration of the lymph glands predominate. Thrombosis may arise secondarily through contact of a suppurating gland with the wall of a large vein.

(3) Cases without interstitial inflammation and without lymph gland suppuration, but with extensive thrombosis of the jugular vein. The thrombosis can be traced back to the retrotonsillar veins.

Tonsil and Pharynx

These three types of infection have also been called the *phlegmonous*, the *lymphogenous* and the *hæmatogenous* types. In addition there are rapidly fatal cases in which none of these changes are present. If the patient's resistance is very low, the bacteria can reach the general circulation without any thrombosis.

J. A. KEEN.

A case of Thrush—Primary in and confined to the Hypopharynx.

E. ESCAT. (*L'O.R.L. Internationale*, 1933, xvii., 161.)

The patient, a peasant aged 58 years, had for eighteen months suffered from discomfort in the throat, slight difficulty in swallowing, and nausea. During this period he was frequently dyspeptic and his tongue was coated. For a fortnight prior to being seen by the author his symptoms had been greatly aggravated; swallowing was almost impossible and although there was no stridor, there was a marked sensation of choking.

Indirect laryngoscopy was almost impossible owing to an intense pharyngismus. Direct hypopharyngoscopy showed a greyish white ulcerated area on the back wall of the hypopharynx which bled easily and was fœtid. In conjunction with the history, the other signs and age of the patient, a diagnosis of neoplasm was made, and the patient was subjected to radium treatment by means of a collar. When seen two months later, cure appeared to be complete.

The patient was kept under observation from time to time, and for two years was free from symptoms. At the end of this period, dysphagia returned and direct pharyngoscopy showed a whitish plaque behind the right arytenoid and extending deep into the hypopharynx in the mid line. The diagnosis was revised and the case was now thought to be Vincent's angina. This, however, was not confirmed bacteriologically.

During the following year, the case alternately improved and retrogressed, but eventually extended until the false membrane covered not only the whole hypopharynx but also the laryngopharynx, sinus pyriformis, and the epiglottis, and the patient was extremely ill, with anorexia, and vomiting. A large piece of the false membrane was removed and again examined bacteriologically by Professor Ristal who reported "an extraordinary quantity of the mycelia of thrush".

In view of this, all antiseptic treatment was stopped and treatment locally and internally with alkali was commenced. In less than forty-eight hours the patient was obviously better, and in eight days appeared to be completely cured. He was seen again one month later, when not only was the local condition completely cured, but his general health was perfect and he had put on weight.

E. J. GILROY GLASS.

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ESOPHAGUS AND ENDOSCOPY

Fulminating Laryngo-Tracheo-Bronchitis. LYMAN RICHARDS.
(*Annals of O.R.L.*, 1933, xlii., 1,014.)

Three outstanding conditions produce upper respiratory obstruction; foreign bodies, diphtheria, and acute infectious laryngitis. The first two are well known, but the last, with its frequent extension into the trachea and bronchi, has received only little attention.

It may be defined as an acute infection of the upper respiratory tract, characterized by a high febrile reaction and an intense inflammatory change in the mucous membrane and walls of the trachea, bronchi and bronchioles, and accompanied by the formation of a sticky exudate which partially or completely occludes the airway. The onset is sudden. A child, most often between two and four, with a slight head cold, wakes up with symptoms of respiratory obstruction.

The symptoms most closely resemble laryngeal diphtheria, but direct laryngoscopy shows absence of membrane and the presence in the glottis of crusts composed of dried secretion. Their removal will relieve the symptoms at least temporarily, but they soon recur. Tracheotomy in the early stages gives relief, but as the condition advances and the secretion tends to dry further and further down the trachea, the symptoms return. The temperature rises rapidly, and with it, the pulse and respiratory rate.

When thus far advanced, the only possible treatment is the mechanical removal of the crusts and secretion by suction and forceps. Suction by itself is generally insufficient, even when performed through a bronchoscope. At the same time, it is of the greatest importance to ensure a high fluid intake to keep the secretion from the lung as fluid as possible. A steam tent and the instillation of a solution of sodium bicarbonate into the trachea are also of value in this respect. Intubation or tracheotomy is essential; the author prefers the latter procedure in that it facilitates repeated bronchoscopy or suction.

The prognosis is extremely grave, even in cases which at first sight appear mild, but there is a reasonable hope of cure by repeated mechanical clearance of the obstruction from the trachea and bronchi.

A pathological examination, made on a patient who died during the acute stage, showed that the changes were those of an acute inflammation of the trachea and bronchi, with diffuse cellular infiltration and destruction of the mucosa. In the lung itself the pathological changes were not marked and although there were some signs of broncho-pneumonia, this appeared to be of secondary importance. In the autopsy of a child who had lived for fifty-four

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days, it was found that the destroyed mucosa of the trachea had been repaired and replaced by a stratified epithelium. The cause of death in this case was a rupture of the trachea with mediastinal emphysema. In all cases the *streptococcus hæmolyticus* was found in pure culture in the damaged mucosa.

E. J. GILROY GLASS.

Congenital Anomalies of the Œsophagus, with special reference to the congenitally short Œsophagus. LOUIS H. CLERF and WILLIS F. MENGES. (*Annals of O.R.L.*, 1933, xlii., 1,058.)

Author's Summary :

Nine cases of congenital shortening of the œsophagus with stenosis and the presence of a portion of stomach in the thoracic cavity are reported. The group consisted of four children and five adults. Two children were of one family, brother and sister. Two groups of symptoms were noted, one consisting of those resulting from œsophageal obstruction and malnutrition; in the other, symptoms due to ulcerations were predominant. The essential points in the Röntgen diagnosis are presented and discussed. The œsophagosopic findings are noted. The condition is believed to be more common than medical literature would indicate.

E. J. GILROY GLASS.

REVIEWS OF BOOKS

L'État actuel de la Radiographie de l'Os Temporal. By Docteur R. THIENPONT. Extrait du Bulletin trimestriel de la Société Belge d'Otologie, de Rhinologie et de Laryngologie. No. 2, Année 1933, 179.

This is probably one of the most extensive works on radiology of the temporal bone which has been published as yet. The details which are given on the radiographic technique of this bone of complicated structure are adequate for those who are familiar with the usual projections. It is pointed out by the author, very rightly, and should be emphasized, that in order that the X-ray appearance of the pathological changes may be interpreted with accuracy and precision, the radiologist must have a knowledge of the normal and its variations, which are well described.

It is shown that by means of Schuller, Stevens, Busch, and Mayer projections, it is possible to examine every surface and edge of the