Dr. JOBSON HORNE suggested the administration of iodide of potassium, beginning with small doses.

Mr. JEWELL (in reply) said he thought the tumour was a bony growth. Something had to be done because of the severe pain. He had thought of making a Moure's incision, turning the cheek back, cutting the bone out, and trying to leave the orbit free. He did not think the injection of novocain would do much good, as the man was incapacitated by the pain, which was increasing.

Some growths of this kind were seen among natives on the West Coast of Africa. This man had served in foreign parts, in Africa as well as in India.

POSTSCRIPT, 16.6.31.—The bony tumour has been removed.

Mr Herbert Tilley showed three specimens illustrating the relationship between a certain type of accident and this age of mechanisation. (1) A "Baby Austin" Model impacted in the Gullet. (2) A Model of an Aeroplane impacted in the Gullet. (3) A Fountain-pen Clip in the right Bronchus.

All these foreign bodies were removed successfully within a few hours of the accident.

# ABSTRACTS

## EAR.

*Are the Terms "Otitis Media" and "Mastoiditis" correct ones in view of our present-day knowledge of the pathology of these conditions?* A. LINCK. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 181-206.)

A plea for a more accurate terminology in otological literature! From a strictly anatomical point of view, an otitis media should mean an inflammation of the middle-ear cavity alone. This we know to be incorrect, an acute otitis media in practically all cases being an inflammation of the mucous lining of the middle ear, plus an inflammation of the mucous lining of an extensive pneumatic cell system reaching various and often remote parts of the temporal bone. It would be better to speak of *acute otitis* and *paraotitis*. When we come to chronic otitis media the discrepancy is still more marked. In many cases the pathological changes are confined to the regions behind the middle ear, a marginal perforation simply providing an outlet.

By "mastoiditis" we indicate a condition in which bone destruction has complicated an inflammation of the mucous lining of pneumatic cells in the mastoid process, and in which this bone destruction has become manifest clinically. If the inflammation in the mastoid process



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clears up spontaneously, even if some bone has been absorbed, we do not speak of mastoiditis but we call the condition simply acute otitis media. Therefore the term "mastoiditis" is illogical.

"Mastoiditis" further implies a localisation of the inflammation of the pneumatic cells of the mastoid process. This is unfortunate because the clinician's attention is directed entirely to the region behind the ear. As long as there is no tenderness or swelling, the most severe symptoms indicating possible complications of the acute otitis (*e.g.* dry tongue, intense headache) may be ignored, for the sole reason that the "mastoid" shows no indications of a complication. When caries and empyema affect outlying groups of pneumatic cells, one has to fall back on terms like "zygomaticitis," "petrositis," "petroapicitis," etc.

The terms "primary," "secondary," "manifest," and "latent" mastoiditis are defined and discussed. The term "primary mastoiditis" should be applied only to a true hæmatogenous osteomyelitis affecting the mastoid process. Such a condition is so rare that it has no practical significance. Apparent "primary mastoiditis" is simply a complication of an acute otitis which was not discovered, or in which the middle ear had already healed before the mastoid complication became obvious.

Alexander has proposed the term *mastoidismus* in order to indicate an inflammatory condition of the mucous lining of the pneumatic cells which may resolve; the term *mastoiditis* should then be reserved for a condition in which progressive and irreparable changes have taken place in the bony structure, and which generally requires an operation.

In order to clear up this clinical and pathological confusion, Linck suggests that otologists should agree to abandon the term mastoiditis and to call the condition *pneumatocellulitis*, a term which would become synonymous with the author's so-called paraotitis (see above).

By the addition to pneumatocellulitis of the adjectives mastoidea, zygomatico-temporalis, peritubaria, petrosa, perilabyrinthica, petrosa, petroapicalis, the localisation would be given.

The arguments are very clear and are well presented, and one feels that these proposals deserve serious consideration, especially from the point of view of the teaching of otology. J. A. Keen.

*The Histology of Fibrous Connective Tissue as a Constitutional Factor in Disease.* M. Schwarz. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 1-29.)

The author's research is based on the histological examination of the temporal bones of 101 new-born infants and human fœtuses at varying stages of development. He holds the view that the so-called constitutional factor in disease is, to a large extent, bound up with the individual structure of the connective tissue which forms a framework for all organs. At birth the tympanum is filled with a myxomatous



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tissue which resembles the almost structureless Wharton's jelly of the umbilical cord. As the tympanic epithelium spreads, this tissue becomes displaced, but it persists in places as a subepithelial layer, and at the same time it alters in structure, the change illustrating the development of adult fibrous tissue. The temporal bone, therefore, lends itself particularly well to the study of the embryology of connective tissue. There are many good illustrations in the text showing the various elements of embryonic and adult fibrous tissue, and these are exhaustively described.

Specimens of the same age-groups are compared with each other, and certain tentative deductions are made regarding a definite type of connective tissue characteristic of the individual. This would depend mainly on the structure of the fibroblasts, and on the thickness of the network of collagen fibres which are thrown off from the embryonic connective tissue cells.

Towards the end of this long article there is a discussion on Wittmaack's theories, as the author recovered epithelial scales from the amniotic fluid in 97 per cent. of the specimens from new-born infants. According to Wittmaack such scales should always lead to a "foreign-body otitis" and arrest of pneumatisation, but this is not confirmed in the present series. The original embryonic tissue or subepithelial layer persists in certain situations longer than in others, *e.g.* in the epitympanic recess. The relative frequency and situation of these accumulations (Polster) are given in schematic form.

Returning again to Wittmaack's theory, the author maintains that the subepithelial connective tissue plays a rôle in pneumatisation which is, perhaps, as important as the part played by the epithelium. When the connective tissue remains embryonic in type, pneumatisation is inclined to be deficient. In specimens in which pneumatisation is good the subepithelial connective tissue has well-formed fibroblasts and resembles adult fibrous tissue. J. A. KEEN.

*Pneumatisation of the Tip of the Petrous Pyramid studied by X-ray Photographs.* L. KRAUS. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxviii., pp. 307-338.)

A long article based on the X-ray examination of 2000 temporal bones. Some 600 of the photographs were sufficiently clear to allow a study of the deeper part of the petrous bone. Sixteen excellent X-rays, admittedly selected ones, are reproduced in the text, most of them with explanatory diagrams, and one cannot but admire the refinements of diagnosis which are possible at the present time, when good apparatus and a good technique are assured. The method of taking the photographs is that originally described by Stenvers, which enables one to see the tip of the pyramid unobscured by any thick parts of the skull. The mastoid cells also show up well as a rule, but



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if necessary they can be photographed again by the Schüller or Mayer technique.

The author uses the term "Pyramidenspitze" in rather a wide sense. It is held to include all the parts of the petrous bone deep to the superior semicircular canal, that is the region of the cochlea, internal auditory meatus, carotid canal, etc.

Pneumatisation of the petrous pyramid takes place in two ways:—

(*a*) An extension of pneumatic cells from the epitympanic recess over the top of the superior canal. In some of the reproductions air cells between the upper margin of the superior semicircular canal and the sharp line marking the upper border of the petrous bone show very well.

(*b*) An extension from the hypotympanic and peritubal air-cells which reach the pyramid from the region below the labyrinth capsule.

Pneumatisation of the pyramid runs parallel with pneumatisation of the mastoid cells but, as it represents a more advanced stage of this development, it is necessarily less frequent. Approximately half of the bones showing well-formed air-cells in the mastoid, also show some air-cells in the "tip" of the petrous pyramid. Taking all the temporal bones together, approximately one-quarter show pneumatisation of this deeper region. J. A. KEEN.

*The Cause of Otosclerosis.* K. WITTMAACK. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 150-173.)

Wittmaack believes that otosclerosis is caused by an interference with the venous outflow from the labyrinth capsule in the region near the oval window and the bend of the facial nerve. By producing this venous stasis experimentally in hens he was able to cause bony changes exactly similar to the otosclerotic focus. The author's theory was advanced more than ten years ago, but has not yet found many adherents, mainly for the reason that it is so difficult to conceive how such venous stasis can arise clinically.

The present article is a study of the venous circulation of the part concerned (the labyrinth capsule just above the oval window), by means of serial sections of temporal bones, and an attempt to demonstrate that interference with the venous outflow of this region is quite conceivable on anatomical grounds.

Three specimens with an otosclerotic focus near the oval window are compared with similar sections of temporal bones without otosclerosis. It appears that the vein draining the otosclerotic focus is nearly always enormously enlarged as compared with the corresponding bony vein of the normal labyrinth capsule (the sections being illustrated); this suggests a venous obstruction acting over a long period.



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With the help of diagrams the venous outflow is explained. The tiny vein which drains the "otosclerosis area" joins a vein which ascends over the promontory with the tympanic nerve; the bend at the point of union suggests that the venous flow is normally in an *upward* direction. This "promontory" vein joins the veins round the facial canal and these drain into the larger vein accompanying the superior petrosal nerve. This vein runs under the dura towards the tip of the pyramid and as a rule joins the *venous plexus of the carotid canal*, but not the superior petrosal sinus. In two of the otosclerosis specimens a marked dilatation of this vein was found at the place where it crossed over the carotid artery. In eight normal "control" specimens this dilatation was found only once and then it was much less pronounced. Shortly after the junction of this superior petrosal vein with the carotid plexus, the carotid artery with its venous plexus enters a *completely closed bony ring* and the same applies to the plexus round the middle meningeal artery into which the superior petrosal vein sometimes drains. The mechanical conditions for a venous stasis of a fluctuating type are therefore present. The venous stasis may be sufficiently strong to cause a *reversal of the venous flow*, and the blood, instead of draining into the vein of the superior petrosal nerve, may flow downwards along the vein of the promontory into the jugular bulb. The "promontory" vein swells up and this is the cause of the characteristic red "blush" seen through the tympanic membrane. The reversed venous flow, affecting the vein draining the special bone area, is the cause of the otosclerotic change in the labyrinth capsule.

A comparison is made with the active backward venous flow in the veins of the leg which is the cause of the formation of varicose veins, as these cannot be explained on a basis of simple stasis alone.

Lastly, an operation is suggested which would consist of destroying the vein of the petrosal sinus and so removing the cause of the otosclerosis and arresting further progress of the disease. The middle fossa is opened by trephining above the zygoma in front of the upper attachment of the pinna. The middle meningeal artery and the groove for the superior petrosal nerve are easily defined after lifting up the dura. The middle ear and mastoid would not be interfered with in this operation. No clinical trial has yet been made.

J. A. KEEN.

*Chondroma in the deep part of the External Auditory Meatus.* E. LÜSCHER. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 63-68.)

*Boy*, aged 11, with a small rod-shaped tumour in the right meatus (4·5 mm. long, 1-2 mm. thick). It projected from the anterior wall of the bony meatus, about 5 mm. in front of a normal tympanic



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membrane. The small tumour was insensitive to touch and could be moved about in various directions with a probe. After removal the section showed a typical *chondroma*, admittedly a very rare finding in this situation.

It is argued that such a cartilaginous tumour should be grouped among the congenital auricular appendages which are usually found in front of the tragus, occasionally behind the tragus at the entrance of the meatus, and very rarely deep in the meatus, as in this case. All these remnants are derived from the cartilage of the first arch (Meckel's) and therefore tend to lie in front of the pinna or if in the meatus they arise from the *anterior* wall. J. A. KEEN.

*Processes of Growth in the normal Labyrinth Capsule and their bearing on Otosclerosis.* CL. F. WERNER. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 128-149.)

*At the age of two* the bony labyrinth is fully formed; it ceases to grow and does not change its structure. That is why embryonic cartilage islands can be found in the bony capsule up to an advanced age. Also, the pattern of blood vessels will remain the same throughout life, no fresh anastomoses with other vessels arising, a point in favour of Wittmaack's theory of the origin of otosclerosis.

*At birth* the adult size is already attained, but certain small adjustments and alterations in the axis of the semicircular canals still occur in the first two years of life; there is a full description of the histological processes by which this is accomplished, with many illustrations of sections. Briefly, the enchondral bone is absorbed on the side towards which the displacement takes place and new bone is deposited on the opposite side. The removal of the enchondral capsule may be so complete that periosteal bone is reached; this is often seen at the periphery of the semicircular canals and at the tip of the cochlear whorl.

Then follows a description of the development of the labyrinth in the chicken, which shows many resemblances to the growth processes in the human labyrinth. In this way the author attempts to meet the objections of Mayer and Kamio, who have criticised Wittmaack's theory of otosclerosis on the ground that there is such a wide difference between the human labyrinth and that of the hen. The experimental "otosclerosis" in hens affects the whole labyrinth-capsule. The author's explanation is that the labyrinth-capsule in the bird is very thin and venous blood can easily flow away through other channels. Therefore it requires an almost complete obstruction of the venous outflow before the experimental lesion can be produced.

J. A. KEEN.



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# Ear

*Why Ligate the Jugular Vein in Cases of Lateral Sinus Thrombosis?* O. M. ROTT. (*Archives of Oto-Laryngology*, September 1931, Vol. xiv. No. 3.)

Ligature of the jugular vein in cases of lateral sinus thrombosis was first suggested by Zaufal in 1880, and since then the procedure has been adopted by the majority of otologists. From time to time, however, doubt has been expressed regarding the value of the operation. Statistics published by Körner, Bezold and others appear to indicate that the mortality of lateral sinus thrombosis is not greater when ligature of the jugular is omitted, and the interesting experiments of Unditz also seem to show the futility of ligature of the jugular vein.

When the wall of the lateral sinus alone is infected, all that is necessary is a complete exenteration of the mastoid cells, and removal of the bone covering the sinus. When there is infection within the sinus, with thrombus formation, incision of the sinus and removal of the clot, so as to secure free bleeding from either end, is sufficient, but if bleeding from the bulb does not take place, the majority of operators advise exposure and ligature of the jugular vein.

The writer of this paper points out that ligature of the jugular does not cut short the septicæmia. To block the chief avenue is useless as a means of isolating infection, unless the collateral channels are also blocked.

Ligature of the jugular vein gets more credit for cures than the facts warrant, and the procedure should be reserved for cases in which there is a definite focus in the vein itself, and it should then be accompanied by resection.

The bibliography accompanying the paper contains 22 references.

DOUGLAS GUTHRIE.

*Chemo-immunity Treatment of Chronic Purulent Middle-Ear Inflammation according to the Method of Professor Daiches.* S. A. WINNIK. (*Acta Oto-Laryngologica*, Vol. xvi., Fasc. 1.)

The treatment of localised infections by means of chemical substances, which kill or prevent the growth of the pathogenic organisms, must gradually give place to immuno-biological methods, which mobilise the protective powers of the body. The work of Carrel, Harrison and others has shown that many chemical antiseptics, even in high dilution, either paralyse or kill the tissue cells, and many form albuminates with the body fluids, and in doing so lose their bactericidal properties. In the treatment of chronic suppurative disease of the middle ear not only have the ordinary antiseptics proved unsatisfactory, but the same must be said of generalised vaccine treatment, probably because the antibodies which are formed cannot reach the foci of the disease in quantities sufficient to be effective. Hence,



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in Professor Daiches' Clinic, after prolonged trial in many cases, generalised vaccine treatment for chronic suppurative otitis media has been abandoned in favour of local immunising of the affected tissue with Besredka's antivirus. In 1925 Professor Daiches reported on a series of 36 cases, treated by this means, in 31 of which the otorrhœa ceased and cicatrisation took place. Later experience in his clinic showed, however, that the treatment failed in a considerable number of cases. In some of these the infection was a highly mixed one, and although certain types of organism might be got rid of by the antivirus, others persisted and prevented healing. Repeated re-infection from the nasopharynx by way of the Eustachian tube was also a difficulty. This was largely overcome by the use of polyvalent antivirus in the form of nasal drops, while the persistence of certain types of organism in the middle ear, in spite of the use of antivirus, was successfully dealt with by the use of a 1 in 1000 or 2000 solution of rivanol, a powerful but non-irritating antiseptic, whose activity is increased rather than diminished by the presence of serum. Hypertonic solutions of alkaline salts also proved useful in some cases.

These methods were employed in 248 cases, chiefly of chronic suppurative otitis media. Coccal infections of the middle and outer ear responded well to the antivirus treatment alone, while mixed infections with cocci and bacilli yielded better to a combination of antivirus and chemical antiseptic (*i.e.*, rivanol). Infections with *Bacillus pyocyaneus* and *Streptococcus mucosus* were resistant to these forms of treatment.

THOMAS GUTHRIE.

*The Galvanic Nystagmus Reaction in Reports on Cranial Injuries and the Diagnosis of Ménière's Disease.* KLAUS VOGEL (Berlin). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxviii., Heft 1, p. 20.)

The galvanic test is recommended as being quite as useful as the rotational or caloric. It is mainly valuable for detecting differences in the galvanic irritability of the two ears, which must be tested separately with one rheophore on one ear and the other on the opposite hand, a difference of 1 milliampere being taken as pathological. It may give definite results when the other tests are inconclusive. Among the advantages are (1) that it can be used for patients lying in bed, as after cranial injuries, and (2) that it is independent of the condition of the middle ear. The galvanic nystagmus is more easily elicited when it is towards the same side as any spontaneous nystagmus which may be present. It helps to excite and allows to continue for some minutes a nystagmus not previously visible. The patient should be looking straight forward through strong lenses (Bartel's) and the observer has to look very carefully in the less manifest cases.

JAMES DUNDAS-GRANT.



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# Ear

*The Blood Picture in Otitic Infections.* HARRY ROSENWASSER and NATHAN ROSENTHAL. (*Archives of Oto-Laryngology*, September 1931, Vol. xiv., No. 3.)

While the otologist does not ordinarily depend on the blood picture for his diagnosis, he may encounter cases of mastoiditis in which the clinical evidences are misleading, and in these cases laboratory aid, such as the study of the blood picture, may be of value in diagnosis and in prognosis.

A review of the literature and the personal observation of the blood changes in over a hundred cases of otitic infection have led the writers to the following conclusions:—

(1) The number of white blood cells and the ordinary differential count do not furnish sufficient evidence of the severity of an otitic infection.

(2) The simplified Schilling hæmogram (a classification of the polymorphonuclear cells based on the morphology of the nucleus) is an important diagnostic aid in otitic infections. The study of the young and of the "staff" cells during the course of otitic infections furnishes important evidence of the intensity of the existing infection.

(3) Observations of the cytoplasmic changes of the polymorphonuclear cells (toxic granules, vacuolisation) are extremely important, from the prognostic standpoint. The relation between the polymorphonuclear cells showing toxic granules and the normal polymorphonuclear cells is the "degenerative index." A steady rise of the degenerative index to about 80 per cent. is indicative of an extremely grave prognosis. A rapid fall of this index to normal is of good prognostic import.

(4) The hæmoglobin and red cells are rarely disturbed in external otitis, acute otitis media, or uncomplicated mastoiditis. Only in infections associated with bacteræmia, namely sinus thrombosis and meningitis, does one note rapidly failing hæmoglobin and a corresponding fall in the number of red blood cells.

Nine tables and two microphotographs illustrate this paper.

DOUGLAS GUTHRIE.

*Observations on the X-Ray Diagnosis of Chronic Changes in the Temporal Bone of Middle-Ear Origin.* G. RUSTRÖM. (*Acta Oto-Laryngologica*, Vol. xvi., Fasc. 2-3.)

Since the year 1926 the author has been able to draw conclusions of value from a large number of cases in which the X-ray findings were verified at operation. In his experience the serious technical



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difficulties in the production of satisfactory skiagrams of the temporal bone and their interpretation are largely overcome by stereoscopic projection. The technique of this method has been rendered much simpler by the apparatus of Lysholm for skull examination. It is of great importance that both the exposure time and the quality of the rays should be adapted to the nature of the object under investigation. In a highly pneumatic mastoid the cell structure is best shown by soft rays, while in the presence of marked sclerosis hard rays give better results. Sharpness of outline is obtained by the use of a small diaphragm. Recently the author has been working with a combination of primary and secondary diaphragms, and this he regards as a notable advance in the technique.

Details of great importance in cases of chronic middle-ear disease, such as cholesteatoma, bone abscess, and cavities filled with granulations can clearly be shown by the author's method.

THOMAS GUTHRIE.

## NOSE AND ACCESSORY SINUSES.

*Treatment of Recent Fractures of the Nose.* A. SARGNON (Lyons). (*Revue de Chirurgie Plastique*, July 1931, No. 2, p. 129.)

The author's method is a combination of several rhinological methods, consisting of Martin's for the reduction and that of Joseph and Molinié for the maintenance of the reduction.

The treatment of fractures of the nose of recent origin consists essentially, first, in reducing the fracture of the bone and of the septum, and secondly, in maintaining this reduction.

*First Stage—Reduction.*—It must be mentioned that, after about ten days, relative union takes place. It is preferable to operate soon after the accident. Local anæsthesia by means of plugging each nostril with cocaine and adrenalin is employed. For young children and nervous adults general anæsthesia (ether or ethyl chloride) is used. The nasal bones are reduced with Martin's forceps, whilst Killian's speculum is used for the septum.

*Second Stage—Maintenance of the Reduction.*—The method is varied according to the severity of the fracture :—

(*a*) For slight displacements a light apparatus is worn intermittently.

(*b*) For fractures of moderate or severe degree the Author immediately employs the "sauterelle de Molinié" which must be worn for two to four days. The treatment is completed by means of the external apparatus. In certain cases a combination of both apparatuses may be used.



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(*c*) Fracture with oculo-orbital and maxillary injuries may be dealt with by external or internal apparatus, or with a combination of both. In cases of severe infection the external apparatus only is to be used.

This method has given excellent results during the last ten years.

AUTHOR'S ABSTRACT.

*The Radical Treatment of Frontal Sinus Disease.* W. UFFENORDE. (*Acta Oto-Laryngologica*, Vol. xvi., Fasc. 1.)

Ever since the early days of the operative treatment of suppurative disease of the frontal sinuses two outstanding difficulties have had to be faced, namely, the avoidance of deformity, and the establishment of permanently free drainage from the sinus. The author considers that the Killian operation, in spite of retention of the supra-orbital bridge, leaves much to be desired from the cosmetic point of view. The region of vital importance at the opening of the sinus can be dealt with equally well by the orbital method of approach, and removal of the anterior wall is therefore unnecessary, except in rare instances of trauma or bone disease. The author therefore combines the Jansen-Ritter orbital operation with an adequate removal of ethmoidal cells and the formation of muco-periosteal flaps to line the wide fronto-nasal passage. In order to obtain sufficient material for this plastic procedure an extensive removal of bone is required, so that besides the whole of the floor or orbital wall of the sinus there must be removed also the lachrymal bone, the nasal bone to the midline and to the pyriform opening, and the whole of the frontal process of the superior maxilla.

In most cases complete removal of the lining membrane of the sinus is unnecessary but, if required, it can be accomplished by the use of a sharp spoon with a malleable shaft.

Reference is made to a long series of cases successfully treated by this method with, in most of them, little or no deformity.

THOMAS GUTHRIE.

*The Management of Fractures involving the Paranasal Sinuses.* JOHN J. SHEA, Memphis, Tenn. (*Jour. Amer. Med. Assoc.*, 7th February 1931, Vol. xcvi., No. 6.)

At the present time an increasing proportion of accidents are head injuries, and in fractures involving the sinuses the sinus fills with blood and readily becomes infected. The rhinologist is best equipped to handle these cases, and by obtaining good results can convince the general surgeon that these cases belong to his specialty. Fractures of the upper jaw involving the antrum are comparatively common. The



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malar bone is often displaced as well. An X-ray study of the orbit in the antero-posterior direction will normally show a line in the outer third of the orbit made by a junction of the outer orbital wall and the skull. This line bears a constant relationship to the outer rim of the orbit and is used to determine whether or not the malar bone has been displaced. The malar bone, if displaced, may be grasped with forceps through the skin and replaced by traction. If the antral wall is badly depressed a naso-antral window is made under the inferior turbinate, a No. 7 Ritter sound is inserted and the fragments replaced. If the antral wall is badly comminuted an open operation through the mouth is preferred. The fragments which cannot be retained in position are removed. Packing is seldom used. In severe cases the parts have to be kept in position by supports or appliances. The skull may be encased in plaster and the supports anchored into the plaster. Sometimes the jaw may require wiring. Perforating fractures of the frontal sinus are commoner than those of the antrum. If the posterior wall is not involved, drainage by the natural route is sufficient. All loose bones should be removed. When the inner or cranial wall is injured an open operation with drainage is preferred. Wounds of the ethmoid cells are often made by bullets; except for adhesions these wounds heal readily with cleansing only. Fractures of the sphenoid are rare but their treatment should be along the same lines.

The article occupies six columns, is freely illustrated, and has a bibliography. ANGUS A. CAMPBELL.

## LARYNX.

*Lipoma of the Larynx.* O. J. DIXON and FERDINAND C. HELWIG. (*Archives of Oto-Laryngology*, September 1931, Vol. xiv., No. 3.)

Lipoma of the larynx is rare and is not easy to diagnose. Gordon New in 1916 could find only 23 reported cases. In all but one case the tumour grew from a pedicle, and the leading symptoms were difficulty in breathing, and choking when fluids were taken.

The writers report the case of a lady, a school teacher, aged 44, who suffered from noisy and difficult breathing. She was greatly crippled by arthritis deformans, and it was thought at first that the disease had affected the joints of the larynx. Laryngoscopy revealed a smooth, pale, dome-like tumour protruding above the left cord from the aryepiglottic fold. As it was thought to be malignant, laryngofissure was performed, when it was found that the tumour was so extensive as to demand laryngectomy. Histological examination, however, showed that the growth was not malignant, but was composed of fatty tissue. As the tumour continued to grow, laryngofissure was



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repeated three months later, and the entire tumour was dissected out with a satisfactory result. The vocal cords were not involved, as the tumour was above this level.

The writers suggest that the case may have been one form of lipomatosis, which may occur as an accumulation of fatty tissue in a chronically inflamed stroma. Fat may be deposited in old pleural adhesions, or in chronically inflamed tonsils.

The case serves to demonstrate the importance of histological examination of all larngeal tumours.

The value of the paper is enhanced by five excellent illustrations.

DOUGLAS GUTHRIE.

*Radium in the Treatment of Hæmangioma of Larynx.* FRANK E. SIMPSON, Chicago. (*Journ. Amer. Med. Assoc.*, 31st January 1931, Vol. xcvi., No. 5.)

Hæmangioma of the larynx is a rare disease and there is some difference of opinion as to what constitutes a true hæmangioma. They are defined as tumours in which a neoplastic process affects the walls of the vessels and usually the supporting connective tissue as well. They are often congenital but may occur at any time of life in almost any tissue. They are benign tumours but are often a seat of serious hæmorrhage. Two cases are reported:—

CASE 1.—Female, age 25, with a history of choking spells, hoarseness and cough since childhood. At 11 years of age an operation was attempted but was abandoned on account of hæmorrhage. During the years following, the growth was cauterised at various times. At the age of 22 she had attacks of bleeding persisting for two months. In December 1923 at the author's first examination a smooth, dark-bluish tumour was seen extending from the larynx to 3 centimetres above the epiglottis. The vocal cords could not be seen. 500 millicuries of radon were applied externally for two hours. Five days later nine glass radon ampoules each containing 0.5 millicuries were inserted into the tumour above the epiglottis. Six weeks later much of the tumour had disappeared. Six years later the general health was good but slight hoarseness and some choking sensations persisted at times. The remains of the tumour still obscured the vocal cords.

CASE 2.—Male, aged 22, with a history of dyspnœa and hoarseness since childhood. Examination showed a prominent mound of irregular dark-blue vessels at the base of the right tonsil. The process extended backwards and downwards on the base of the tongue, around the epiglottis, into the pyriform sinuses, to both arytenoids, ventricular bands and ventricles. The true cords were not involved. 713 millicuries radon were applied to the base of the tongue for thirteen



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minutes. Next day 609 millicuries were applied to the right tonsillar region for ten minutes. The following day 305 millicuries were applied to the left tonsillar region for thirteen minutes. A month later 230 millicuries were applied intra-laryngeally for thirteen minutes. Eight months later the tumour had practically disappeared.

The article occupies four columns, is illustrated, and has a bibliography. ANGUS A. CAMPBELL.

## PHARYNX.

*Symptoms of Focal Infection of Tonsillar and Dental Origin. Focal Infection in Muscle and Joint Affections. Studies of the Leucocytic Blood-picture.* R. GORDING and H. BJÖRN-HANSEN. (*Acta Oto-Laryngologica*, Vol. xvi., Fasc. 2-3.)

Examination of the leucocytic blood-picture in patients suffering from primary chronic polyarthritis shows obvious variations. In a number of patients, in whom there is no indication of any infection, we find the blood-picture normal. In a good many other patients, on the other hand, with similar symptoms we find signs of infection in the blood-picture.

The authors have carried out an investigation in order to determine what symptoms of a general and "rheumatic" character can be referred to infected foci in the tonsils and teeth, and further, whether conditions caused by focal sepsis are so often associated with changes in the leucocytic blood-picture (*i.e.* leucocytosis or the relative increase of immature forms of neutrophil leucocytes) that this might be used as a diagnostic aid in recognising symptoms of focal infection.

The authors' results are based on a series of 64 selected cases in which they have themselves carried out the focal treatment, and which have subsequently been kept under observation for considerable periods. Following removal of the focus of infection 55 of these patients became free from symptoms, but in 6 of them recurrence took place. In the remaining 49 the treatment was completely successful.

The result of the blood examinations was as follows:—A negative blood-picture does not exclude the possibility of the manifestations present being of infective origin. This was the case in 2 of the 64 cases.

A positive blood-picture indicates generally that the patient is probably under the influence of an infection. Of the source of this infection we have, however, no *a priori* knowledge, nor do we know whether the positive blood-findings have any causal connection with a manifest polyarthritis or whether they are due to some infection unconnected with the present joint phenomena. Positive blood-



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findings are, therefore, in themselves of no particular diagnostic importance. Viewed, however, in connection with the history and the clinical findings, a positive blood-picture has proved, at any rate in cases of the kind dealt with here, a very useful aid to diagnosis.

THOMAS GUTHRIE.

## ŒSOPHAGUS AND ENDOSCOPY.

*Notes on Nervous Dysphagia, with Special Reference to its Cause.* GRIFFITH EVANS. (*The Practitioner*, August 1930.)

The aims of this article are as follows:—

(1) To show that the conditions known as hysterical dysphagia (Vinson and Plummer), spasmodic contraction of the œsophago-pharyngeal junction (Brown-Kelly and D. R. Paterson), dysphagia with anæmia (Munro Cameron) and achalasia (Hurst) are closely related and have a common origin, if, indeed, the terms do not refer to the same disease affecting different parts of the œsophagus.

(2) To show that the underlying lymphocytic infiltrations are not limited to the œsophagus, but are to be found in the heart, aorta, liver, suprarenal glands and elsewhere.

(3) To show that these infiltrations are indistinguishable microscopically from those which Warthin states are pathognomonic of chronic endo-syphilis.

(4) To offer clinical evidence in support of the hypothesis that these changes are low-grade syphilitic lesions, possibly in the third or fourth generations of inherited lues.

Experience gained in general practice leaves a strong impression that this disease has been regarded too much as a local condition, whereas it is a local manifestation of a general disease. Hurst's view of the pathology of achalasia, namely, that it is a lymphocytic infiltration of Auerbach's plexus in the œsophageal wall which terminates in fibrosis and destruction of the nerve cells, is accepted as being established. Cannon produced the same end-result of closure of the lower end of the viscus with dilatation of the thoracic part by experimental section of the vagal branches of the œsophagus. In general practice, disorders of swallowing due to cellular infiltrations which embarrass but do not block reflex areas, are much more common than the final stage of achalasia. The progress of the knowledge of the pathology underlying this syndrome is briefly reviewed and the literature is discussed.



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A series of seven cases which conform to an easily recognisable clinical type is quoted. All were women in middle life. They were thin, with a facial pallor which suggested pernicious anæmia but lacked the yellow tinge. The lips were pale and thin: moist, smooth fissures were found at the angles of the mouth. The tongue was atrophic and pale and often tender. The pharynx was atrophic, dry and pale. Four of the seven had minor signs in the central nervous system. Four of the seven had persistent tachycardia. Details of the symptoms and signs of the patients are given. The anæmia in every case was of the chlorotic type. In one case malignant change occurred and a post-mortem examination was made. The findings post mortem were indistinguishable from the infiltrations described by Warthin as pathognomonic of endo-syphilis.

The clinical signs show that the seven patients suffered from widely distributed lesions. It is not at first apparent that these lesions are those of chronic endo-syphilis though one patient gave a suggestive history of miscarriages, and five have been relieved or improved by bismuth injections and internal administrations of mercury and iodides.

R. R. SIMPSON.

## MISCELLANEOUS.

*Treatment of Pyæmia and Septicæmia with Activated Blood of a Donor.* R. PERWITZSCHKY. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxix., pp. 110-117.)

The author describes a new method of serum treatment for desperate cases of septicæmia and pyæmia. Judging by the eight clinical histories in which temperature charts are reproduced, this method may truly be described as life-saving. In the majority of the cases septicæmia had followed lateral sinus thrombosis.

Buzello had previously described a method in which a vaccine prepared from the patient's blood was injected intravenously into a donor, whose activated blood was later used for the patient. The author has simplified the procedure by using a stock polyvalent streptococcal serum, 1 to 2 c.c. of which is injected intravenously into the donor. One can choose any near relative as donor, special blood tests for compatibility being unnecessary, as the method is not a transfusion in the ordinary sense. One hour after the injection of the serum 10 to 20 c.c. of blood are withdrawn from the donor's vein and are at once injected into the gluteal muscle of the patient before it can clot in the syringe. This is repeated after six hours and again on the next day. Both the donor's and the patient's defensive powers are tested by frequent leucocyte counts. The leucocyte figure of the patient goes up in a remarkable manner after the first or second



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injection and the pyæmic temperature, which may have lasted for weeks, suddenly drops.

The author does not attempt to say whether his method is a specific immunisation or simply a particularly effective form of unspecific shock therapy ("Reizwirkung"). But the success of the method is so striking and it is so comparatively easily carried out, that a trial of the treatment in other clinics seems very desirable. J. A. KEEN.

*Tumours of the Hard Palate.* PROF. DR. JOS. CÍSLER. (*Oto-Laryngologica Slavica*, 1931, Vol. iii., Fasc. 3.)

Six cases of clinically benign tumours of the hard palate are described. Histological examination revealed that two of these tumours, although not differing from the others in appearance or clinically, were in reality malignant. The cases were: (1) Cavernous hæmangioma; (2) Papilloma; (3) Spino-cellular epithelioma; (4) Myxochondro-epithelioma; (5) Hard fibroma; (6) Myoma.

E. J. GILROY GLASS.

*An Evaluation of Agents that Destroy or Remove Malignant Disease.* A. C. SCOTT, Temple, Texas. (*Journ. Amer. Med. Assoc.*, 8th August 1931, Vol. xcvii., No. 6.)

X-ray and radium, although disappointing in a large measure, have a field of usefulness. They are of great psychological value in the treatment of many hopeless cases. Their use in superficial lesions is justified only for cosmetic reasons. In certain locations, when wide surgical excisions cannot be accomplished, radium has a distinct field. Surgical removal by wide excision has proved beyond all reasonable doubt the most exact and most dependable of all single agents. Contamination by an infected scalpel or gauze sponges has produced many recurrences.

Cancer cells are rendered sterile at less than 120° F. The utilisation of intense heat under perfect control by means of the electrical loop knife augments the efficiency of surgery to a degree hitherto unknown. There is no virtue in electricity for the destruction of cancer except for the heat produced at or near the point of contact of the metal with the tissues. Heat control with the diathermy knife is wellnigh perfect for making incisions, flap reflections, cutting muscle and dense fascia. The high cutting current is dangerous in close proximity to large vessels or nerve trunks. Coagulation, although not conducive to primary union, has a distinct place. The Downes loop-cautery knife may be used at low temperature for cauterisation and hæmostasis, or at high temperature for more rapid cutting.

The article occupies six columns. ANGUS A. CAMPBELL.



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