

## ABSTRACTS.

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### PHARYNX.

**Researches on the "Entamoeba Buccalis" in Pharyngology and in Rhinology.**—C. E. Benjamins. "Arch. Ital. di Otol.," May, 1919.

The so-called *Entamoeba buccalis* is found in normal mouths. It resembles in some respects the amœbæ normally found in the intestine. It is most commonly found between the ages of fifteen and thirty. Care of the teeth has very little effect on the presence or absence of the organism. Caries of the teeth has very little influence on the number of amœbæ in the mouth, but in pyorrhœa they are very much increased. Out of sixty tonsils examined Benjamins found the amœba ten times, namely, four times in diseased tonsils and six times in healthy ones. Thirty adenoid masses were examined with negative result. In the pus of twenty-three otitis media cases no amœbæ were found. Pus from twelve cases of maxillary antrum suppuration contained no amœbæ. From these results the writer concludes that the *Entamoeba buccalis* is not pathogenic.

J. K. Milne Dickie.

**Case of Tonsillectomy in a Man Weighing 23 st.**—F. E. Shipway. "Proc. Roy. Soc. Med.," June, 1919, Section of Anæsthetics, p. 18.

The patient was a man, aged fifty-two, and weighed a little over 23 st. He was of huge size, with a very short thick neck, much fat around the chin and angles of the jaws, a perfect set of teeth, and very large abdomen. He usually slept in a chair. The throat was irritable. The pulse was steady and full, arteries good, systolic blood-pressure 130; heart-sounds rather faint but nothing abnormal detected, and lungs healthy. There was no albumen or sugar in the urine.

It was decided that an attempt should be made to enucleate the tonsil under deep anæsthesia with a pillow under the shoulders, the head hyperextended, and the mouth widely open.

The night before the operation the patient was given 15 gr. of bromide, and next morning, three-quarters of an hour before the anæsthetic,  $\frac{1}{4}$  gr. of morphine and  $\frac{1}{100}$  gr. atropine. Induction was started with C.E. As soon as the stage of excitement commenced open ether was given. Respiration became noisy and the colour slightly cyanotic; this was quickly relieved by oxygen, and the administration was continued until the mouth could be opened by a wedge and a gag inserted.

A sterile rubber catheter attached to the warm ether apparatus was pushed down one nostril and a mixture of oxygen and chloroform with a little ether administered. Anæsthesia soon became moderately deep and of good quality; the last pillow was removed and the head was bent back as much as possible. The breathing at once became much embarrassed, and in spite of tongue-traction and of the jaw being held forward by a finger in the

mouth it was obvious that the operation could not be done in this position. The head was, therefore, brought into line with the body and the breathing immediately became quiet and easy and slow. Deep anæsthesia was then established, chiefly by means of chloroform; the eyes were fixed, pupils small, corneal reflex moderately brisk, pulse slow, regular, and of good tension, and the colour excellent. Pulling on the tonsil evoked no reflexes, and enucleation was successfully performed. Fortunately there was very little bleeding. Reflexes soon returned, and the patient made a very good recovery. *Archer Ryland.*

**Dental Brooch in the Throat.**—**T. G. Edwards and W. A. Edwards.**  
 "Medical Journal of Australia," May 31, 1919.

During a dental manipulation the surgeon allowed the instrument to slip from his fingers and the patient swallowed it. A skiagram which is reproduced showed the position of the foreign body. The large end was in the recessus pyriformis, and the upper sharp end had penetrated the pharyngeal wall to a depth of 0.5 cm. Marsh removed it by the indirect method. The foreign body, 3.5 cm. long, was an ordinary hypodermic syringe needle. *C. H. Brady.*

## NOSE.

**Nasal Obstruction in Aviators.**—**Douglas Guthrie.** "The Lancet," 1919, vol. i, p. 136.

Douglas Guthrie summarises the effects of nasal obstruction on the aviator as—(1) *On the lungs*: The chest is never satisfactorily expanded or the lungs sufficiently aerated. Serious "oxygen want" results. (2) *Equilibration*: The Eustachian tubes are impaired in function, there is resulting alteration of labyrinthine tension, communicated from middle to inner ear by round and oval windows. The risk of a crash is, therefore, considerable. (3) "*Reflex*" effects. Headache, mostly due to pressure of deflected septum against the middle turbinal. The causes of nasal obstruction in aviators are adenoids, hypertrophic rhinitis, and septal deviations. Polypi were encountered by Guthrie only once. He insists upon the fact that *a degree of nasal obstruction which would cause little trouble on the ground may be very troublesome in the air.* The nasal mucosa becomes swollen and engorged at heights over 7000 to 10,000 feet. Treatment is therefore of some importance. *Macleod Yearsley.*

**The Bacteriology of Chronic Nasal Catarrh and its Treatment by Auto-genous Vaccines.**—**Leonard Mackey.** "British Medical Journal," August 9, 1919, p. 159.

This paper is based upon the results of bacteriological examination in 558 cases of chronic nasal catarrh. Included under that heading are:

- (1) Cases of recurring acute attacks of nasal catarrh.
- (2) Cases of chronic nasal and post-nasal catarrh in which the presence of discharge is the chief complaint.
- (3) Cases of post-nasal catarrh in which the patient is unaware of discharge, but complains of its consequences, such as bronchitis, digestive disorders, feverish attacks, general ill-health, etc.

Single attacks of "cold in the head" and epidemic nasal catarrhs (influenzal, etc.) are not here considered, while chronic catarrhs associated with polypi, atrophic rhinitis or sinus suppuration are likewise excluded.

Most of the cases showed nothing abnormal in the nose.

In making cultures, a swab, mounted on finer wire than the ordinary throat swab, was passed along the floor of the nose to the nasopharynx.

It is of the utmost importance that cultures should be made as soon as the swab is taken. Delay may entirely alter the results, since important germs such as the *Pneumococcus* and *B. influenzae*, die quickly as the swab cools, while others, such as staphylococci, may actually multiply on the swab in the course of a day.

In health the nasal cavity may be sterile, but more frequently gives a few colonies of *Staphylococcus albus* and diphtheroid bacilli (*B. septus*, etc.).

Of the organisms capable of causing chronic nasal catarrh the *Pneumococcus* was by far the commonest. Next in frequency came *B. influenzae*. Those two organisms predominated over all others in the present series of cases. Pure cultures were obtained in 351 cases.

Routine examination of the nasal passages would be useful in many cases of chronic and inexplicable disorders. Chronic bronchitis is frequently of nasal origin and the causal organism may be obtained in pure culture from the nasal swab. Certain cases of neurasthenia and gastritis may also have their origin in the nose, for nasal infections are commoner and more important than pyorrhœa.

The writer claims good results from the use of autogenous vaccines in over 500 cases. In half the cases the catarrh was cured and the nasal cavity rendered sterile. Many other cases were cured of the discharge, although the organism was still present in the nose after treatment. In patients with secondary disorders, whether the catarrh was cured or only reduced, the general health was improved and the tendency to chills and "fugs" was lessened.

Vaccine treatment was not adopted for children, since chronic nasal catarrh in children is dependent upon adenoids, not necessarily so large as to cause nasal obstruction, and these should be treated surgically.

Douglas Guthrie.

**Ivory Exostosis, Growing from the Roof of the Frontal Sinus into the Orbital and Cranial Cavities, Removed through an Osteoplastic Opening in the Cranium.—William Lang and Donald Armour.**  
 "Proc. Roy. Soc. Med.," June, 1919, Section of Ophthalmology, p. 16.

F. E—, male, aged nineteen. When first seen (February, 1918) there was a displacement of the left globe forwards, downwards, and outwards, which had been noticed by the friends for six months, and diplopia had been present for three months. Vision =  $\frac{6}{6}$  with Cyl. — 2 D<sub>170'</sub>; pupil normal, fundus normal. No limitation of movement. The roof of the orbit was depressed and felt hard. There was no pain nor discomfort.

A skiagram revealed a solid mass in the orbit.

The growth was removed by operation in December, 1918.

The patient's recovery was complete and perfect. The globe was in its normal position; no diplopia. Left vision =  $\frac{6}{6}$  c. cyl. + 0.75 D.<sub>100°</sub>;

binocular vision, no fundus change, no headache, and the patient appeared brighter.

The surgical problem in this case was one of operative approach. It was concluded that the best method was by an osteoplastic flap turned down in the frontal region. Such a flap was made with its base at the supra-orbital margin, turning down the scalp and bone together. The cranial portion of the tumour which was pushing up the under surface of the frontal lobe covered by dura was thus exposed. By pushing dura and brain gently back over the summit of the tumour, the whole extent of its cranial portion could be seen. It appeared to be fixed to the supra-orbital margin. The supra-orbital margin on either side of the tumour was therefore sawn through, but it separated cleanly from the tumour, and remained attached to the periosteum. The tumour was removed with chisel and hammer, the roof of the orbit, which was involved, being removed piecemeal by means of cutting forceps. The operation was completed by putting the wedge of supra-orbital margin back again, then replacing the bone flap and scalp, and stitching it up. There was uninterrupted recovery. The intra-cranial portion of the tumour was smooth, white, and ivory-like, while the other portion below the orbital roof was covered by mucous membrane.

This fact shows it must have been growing from the frontal sinus. There was no evidence at the time of operation that the frontal sinus had been opened. On the day following the operation, however, and for two or three days following it, the patient had an escape of blood from the nostril.

*Archer Ryland.*

**Acute Suppurative Hypophysitis as a Complication of Purulent Sphenoidal Sinusitis.**—T. R. Boggs and M. C. Winternitz. "Johns Hopkins' Hospital Reports," vol. xviii, 1919.

The following case is, as far as is known, the only one on record:

Woman, aged forty-three, admitted Johns Hopkins' Hospital June 17, 1915, complaining of stiffness and soreness of neck muscles, headache, pain behind eyes, and tenderness of scalp. Illness began May 7, 1915, with acute coryza and aching all over. On May 20, 1915, had soreness of right side of neck. Throat felt full. Slight tenderness over mastoids. Examination of ears and throat negative at the time. No fever till May 29, 1915, when the temperature rose to 101° F., pulse 101, respirations 20, blood-pressure 135. Albumen and a few casts in urine. Improved a little after May 30, 1915. Had two attacks of severe pain in back and had varying degrees of pain in neck and scalp. X ray showed left antrum a little cloudy. On admission, June 17, 1915, temperature 103° F. Optic discs normal. Movement of eyes causes pain. Patient can be roused to answer questions. No paralysis. Nothing to note in chest or circulatory system. Kernig's sign absent. Later in day temperature 104° F. Leucocytes 11,600. Blood-sugar 0.243 per cent. Urine gave doubtful sugar reaction, which increased after patient had had two slices of bread to 2½ per cent. Acetone and diacetic acid strongly present. Orifices of nasal sinuses appeared normal. Antra and frontal sinuses illuminated. No optic neuritis. Cerebral abscess (?) or encephalitis (?) June 19, 1915: temperature 107° F., but rose later to 108.5° F. Comatose; death.

There had never been any convulsions or strabismus or ptosis. Cerebro-spinal fluid immediately after death clear. *Post-mortem* examination: Extravasation of blood over right frontal bone. Base of brain

covered with dark red friable exudate, which was very abundant over the roof of the fourth ventricle and round the chiasma. Smears showed staphylococci. There was a good deal of softening of the brain round the basal ganglia. Hypophysis seen as a dark red, very friable body. Pus exuded from sella. Nothing to note in rest of brain or ears. Thick pus in right sphenoidal sinus. Microscopic examination showed vessels and blood-sinuses round pituitary partly occluded by septic thrombi. Anterior lobe infiltrated with polymorphs. Large V-shaped infarct. Posterior lobe swollen and fissured. The points of interest are:

"(1) The entire absence of localising or neighbourhood symptoms in the central nervous system.

"(2) The presence of hyperglycæmia and glycosuria as possible evidence of involvement of the pituitary gland in a person previously not glycosuric and showing signs and symptoms of intracranial inflammation.

"(3) The normal appearance of the external orifices of the cranial sinuses does not exclude sinusitis of the severest grades.

"(4) The great importance of a thorough, competent X-ray examination in such cases."

*J. K. Milne Dickie.*

### Three Cases of Interest in Rhinology.—H. Seward Marsh. "Medical Journal of Australia," June 7, 1919.

**CASE 1: *Asthma due to Chronic Antral Suppuration.***—A man, aged fifty, subject to asthma for four years, had polypi and deviated septum in right nostril, and chronic antral suppuration same side and one polypus on left side. A submucous resection of septum was done, and the polypi removed. Two weeks later, under local anæsthesia, by submucous injection of opothesin (P. D. & Co.) in canine fossa, a radical Caldwell-Luc operation was performed on right antrum. The asthma had disappeared two weeks later. [Abstractor prefers in such cases to first treat the antrum, and get a clean nose before performing a submucous resection of septum.]

**CASE 2: *Tooth in Antrum of Highmore.***—Patient had suffered for some years from a discharge of pus from a sinus above site of left upper wisdom tooth. The sinus was very minute. No wisdom tooth present. Skiagram showed what appeared to be a tooth far forward in left antrum. Antrum opened in canine fossa, and a tooth was discovered adherent to the mucous membrane lining the outer wall of the antrum, immediately internal to the opening in canine fossa. Marsh remarks that the condition is rare. He is of opinion that an unerupted molar tooth must have worked its way into the antrum, and become fixed there. Tooth removed. Caldwell-Luc operation.

**CASE 3: *A Case of Vacuum Frontal Headache.***—Patient had suffered for some years from frontal headaches. Seldom free from them. At times almost unbearable. Treatment including correction of supposed refraction errors had afforded no relief. A high deflection of nasal septum to the right, pressing on the anterior end of middle turbinal was removed by submucous resection. Patient has had no headache since intra-nasal pressure was removed. Marsh is of opinion that this was a case of vacuum headache from blocking of the openings of the frontal sinus and anterior ethmoidal sinuses, following the theory of Sluder, who brought forward this hypothesis.

*A. J. Brady.*

**Alar Collapse following Septal Abscess in an Infant.—David N. Husik.**  
 "The Laryngoscope," March, 1919, p. 166.

Husik reports the case of a female infant who five days after birth developed an acute coryza with mucoid discharge and some blood. There was no history of injury. The discharge increased and she developed a gastro-intestinal condition. When the child was seven weeks old the family began to notice that the anterior nares were closing in. When Husik saw the child she was nine weeks old, and appeared emaciated; anterior occlusion almost complete; mouth-breathing. There was a depression where the end of the nasal bones and soft parts meet. Examination showed a large cartilaginous perforation. A diagnosis of congenital lues was made, but Wassermann reactions taken on the child's father and mother came back negative.

Husik thinks the most probable explanation is that during the first few days of life while in a charity institution the child had a slight injury to her nose. Hæmatoma developed, and later suppuration with absorption of cartilage and perforation. The early pressure of hæmatoma and later of the abscess against the alæ caused a paralysis of alar muscles, with consequent alar collapse.

*J. S. Fraser.*

## LARYNX.

**Case of Laryngo-fissure with Removal of Intralaryngeal Growth Performed under Gas and Oxygen—H. E. G. Boyle.** "Proc. Roy. Soc. Med.," June, 1919, Section of Anæsthetics, p. 20.

The patient was a man, aged fifty. Preliminary alkaloid injection was given. He was anæsthetised with gas and oxygen with regulated re-breathing.

Before the larynx was split a tracheotomy was done, and gas and oxygen was led in through the tube.

At the end of the operation the patient was returned to bed with the tracheotomy tube *in situ*, and when seen ten minutes afterwards he was comfortable and in no pain.

This case is an illustration of what can be done with gas and oxygen, and it has led the author to continue his efforts to perfect this method for other throat work. He finds that the best results for nose and throat work are obtained by using gas and oxygen in combination with a C.E. mixture.

Time alone will show how far it will become possible to develop the method and to reduce the C.E. mixture.

*Archer Ryland.*

**A Case of Bilateral Recurrent Paralysis.—R. Maupetit.** "Revue de Laryngologie," No. 12, June 30, 1919.

The patient, a soldier, aged fifty-eight, developed hoarseness six months previously. Had been getting thin. Paralysis of left vocal cord diagnosed. Some time later radioscopy showed a shadow in the mediastinum above the heart. Diagnosis of mediastinal tumour made. Later patient began to suffer from shortness of breath and a swelling of the chest-wall was seen. Both vocal cords now seen to be paralysed. The left cord was in the cadaveric position and immobile, the right moved slightly on inspiration. Tracheotomy determined upon on account of difficulty of respiration and fear of spasm. On introducing the

cannula some resistance was felt and a gush of dark-coloured fœtid pus was coughed out. After this the breathing became normal. The patient, however, died in the evening. *Post-mortem* not possible.

*J. K. Milne Dickie.*

### E.A.R.

**Surgical Pathology of the Mastoid.**—C. F. Beck. "Annals of Otol-ogy," xxvii, p. 869.

Beck discusses briefly the subject under the following heads: I. Acute mastoiditis: (a) Confluent mastoiditis (cell route); (b) osteophlebitic mastoiditis (vascular route). II. Chronic mastoid disease: (1) Osteo-fibrosis; (2) osteofibrosis with fistular tracts; (3) osteofibrosis, fistular tracts and cholesteatomatous infiltration; (4) osteofibrosis, fistular tracts, cholesteatomatous infiltration, with cavity formation of cholestea-tomatous masses; (5) tuberculous osteitis; (6) syphilitic osteitis; (7) actinomycotic osteitis; (8) reparative osteitis; (9) foreign body—(a) sequestrum, (b) any other substances; (10) neoplasms—(a) sar-coma, (b) carcinoma, (c) endothelioma.

*Macleod Yearsley.*

**Local Anæsthesia in Mastoid Operations.**—H. B. Orton. "Annals of Otol-ogy," xxvii, p. 1261.

Based on eight cases (nine mastoids) done under novocain. The results showed: (1) Perfect anæsthesia without prolongation of the operation. (2) Absence of danger of pneumonia from inhalation. (3) Convalescent period shorter. (4) Post-operative pain much lessened. (5) It is to be recommended in all cases following pneumonia and empyema where ether is contra-indicated. The method used was the injection of solutions from  $\frac{1}{2}$  to 1 per cent. of novocain. The skin was anæsthetised along the line of incision from above auricle to 1 in. below tip of mastoid, where a deep injection was made to block off the great auricular. The small occipital is blocked by injection  $1\frac{1}{2}$  in. behind and on a level with the floor of the meatus. Deep injections were then made under the periosteum along the posterior meatal wall. After the injections five to ten minutes elapsed before operation was commenced.

*Macleod Yearsley.*

**A New Method of Incision of the Tympanic Membrane for Acute Otitis.**—R. Lake. "Lancet," 1919, vol. i, p. 977.

The author, finding a high average of mastoid operations after preliminary incision, considers the vertical method unsatisfactory. He advocates, therefore, a crescentic incision "following the contour of the edge and of about the same extent of the posterior superior quadrant." That in his figure appears to take up the superior half of the membrane. The reader is left in the dark as to the fate of the malleus, unless the drawing merely represents the bulging portion of the membrane. [The abstractor has used a similar crescent incision, as giving better drainage, in selected cases for the past ten years. Occasionally an inferior crescentic incision gives better results.]

*Macleod Yearsley.*

**A Case of Acute Septic Meningitis of Otitic Origin; Complete Recovery.**—J. Arnold Jones. "Lancet," 1919, vol. ii, p. 59.

This case is chiefly remarkable for its recovery. A mastoid operation had been performed at a casualty clearing station fourteen days before the patient came under the author's care. The organisms found in the

cerebro-spinal fluid were of low virulence and the resisting power of the patient was weakened by malaria. It was the latter factor that probably determined the suppurative lesion of the meninges. From over three years' experience in Macedonia the author has no hesitation in saying that complications of middle-ear suppuration are more common than they would be in England under the same circumstances—a fact due to the deleterious effect of malaria on the resisting powers of the individual. Organisms of low virulence (in this case a Gram-positive staphylococcus and, later, a Gram-positive diplococcus) are thus able to bring about infections, but this very fact gives the patient a chance of ultimately overcoming them. It is noteworthy, too, in the case reported, that marked relief followed each lumbar puncture. *Macleod Yearsley.*

**The Use of Bismuth and Iodoform in the Treatment of Chronic Suppurative Otitis Media.—F. Stoker.** "The Lancet," 1919, vol. ii, p. 200.

Commencing by the use of "bipp" in mastoid work, the author was encouraged to use a powder of bismuth and iodoform in certain cases of chronic ear suppuration. He classified cases in four types: (1) Those in which suppuration is not confined to the tympanum, but has extended to the mastoid or labyrinth; (2) those in which nasopharyngeal or tubal sepsis is responsible for the continuance of the suppuration; (3) those in which the bony tympanum is carious. It is in the last group that "bipp" is useful. Technique is important, and may be summarised thus: (1) Establishment and maintenance of thorough drainage; (2) removal of dead epithelium, etc., by hydrogen peroxide; (3) thorough cleansing of meatus and tympanum with spirit, swabbed on, and allowed to dry; (4) covering with insufflations of "bipp." In mild cases one, and in profuse cases three applications weekly will suffice.

*Macleod Yearsley.*

**Two New Instruments for Reaming the Upper End of the Eustachian Tube in the Radical Mastoid Operation.—Alfred Kahn.** "The Laryngoscope," March, 1919, p. 143.

Kahn has devised a "mouse-nosed" Eustachian curette and burr. The curette end consists of a long spoon tapering to a point. The sides of the spoon must be very sharp. The spoon is tipped at its apex by a probe-like nose. The handle is round and roughened, so that the curette can be easily manipulated between the thumb and first finger. The burr is long, narrow and tapering.

*J. S. Fraser.*

**Anatomic Points Determining the Direction of the Needle and the Proper Route for Lumbar Puncture in Children and Adults.—Regan** (New York). "Amer. Journ. Med. Sci.," January, 1919.

There is considerable difference of opinion upon details of the operation of rachientesis, particularly as to the route for puncture and the direction of the needle.

As a result of clinical experience and a study of the anatomy of the parts, the author greatly prefers the median route to the lateral both in children and adults. In children the needle should be introduced directly perpendicular to the spine and exactly in the middle line; in the majority of adults the same direction will be successful especially if the spine be well flexed. In some cases, however ("a decidedly minor percentage"), it is in adults impossible to introduce the needle in a perpendicular

direction, and in such instances the direction must be changed by withdrawing it slightly and directing it obliquely upwards at an angle of 60 to 45 degrees. It is possible to obtain fluid by the median route in adults even in cases of marked opisthotonos if a sufficient upward inclination is given to the needle.

*Thomas Guthrie.*

**Posterior Mastoiditis, with Sub-occipital Abscess and Nervous Syndrome (Foramen lacerum posterius).—Fiocre.** "Rev. de Laryngol., d'Otol., et de Rhinol.," July 15, 1919.

Three cases are related in which mastoiditis was complicated by a purulent collection in the planes of the neck below the basis cranii. The nervous syndrome depended on pressure on the anterior condyloid and jugular foramina. The clinical manifestations—some only of which were present in each case—were torticollis, paralysis of one half of the palate and of one half of the tongue. All the cases recovered with free drainage.

*H. Lawson Whale.*

**The Rapid Cure of Mastoid Operations by the Carrel Method.—M. Mahn.** "Acad. de Méd.," April 16, 1918.

In treating acute mastoiditis the writer does the ordinary Schwartz operation, and irrigates the wound with Dakin solution for a period proportional to the duration and virulence of the disease. Secondary suture is carried out as soon as the wound is relatively sterile, *i. e.* when microscopic examination of the exudate shows an average of less than one microbe to each field, provided that that microbe be not a streptococcus. In simple cases a small Carrel tube is stitched into the wound and the rest of the wound closed. After irrigation for two or three days the tube is removed and the skin approximated. A pad is firmly applied to close the dead space. The writer claims to obtain healing in ten days. In cases complicated by inflammation of the soft tissues, as by osteomyelitis, the irrigation is alternated with periods of ordinary dressing for two or three days at a time.

*J. K. Milne Dickie.*

**A Case of Otitis caused by Instillation of Nitric Acid.—B. Agazzi.** "Arch. Ital. di Otol.," vol. xxviii, fasc. 3, 1917.

A soldier admitted to otological department April 16, 1917, with running ear.

History of some pain in right ear for a fortnight. Inferior perforation of right drum membrane and some yellow pus seen. Total deafness in right ear.

On April 18 had sudden severe hæmorrhage from the right ear and nostril. Blood venous in character. Incus found lying in the clot in the meatus.

Next day on removing dressing another very copious hæmorrhage occurred which was stopped with plugging.

The same evening patient had a severe rigor lasting an hour. At this stage he confessed that he had introduced a small quantity of nitric acid into his ear in order to go to hospital with otitis. The acid had evidently caused wide-spread necrosis in the ear as evidenced by the falling out of the incus and the hæmorrhage.

On April 20 had severe headache and some spontaneous nystagmus to the diseased side. Caloric reaction on left (healthy) ear produced no effect. Some diminution of the nystagmus when right ear irrigated. The patient showed some asynergia of the left arm of cerebellar type. Some

adiadochokinesia. On attempt to walk the patient fell to the left (sound) side. Plantar reflex extensor on left side; other reflexes normal.

April 22nd: Photophobia; mastoid tenderness; right facial paralysis. Operation. Whole mastoid process necrotic; fistula of external semicircular canal. Some very fetid pus came from vestibule. Tympanic cavity full of septic clot.

April 23: Second operation: Jugular bulb opened up; full of clot. Jugular vein ligatured in neck.

April 29: Complete left hemiplegia.

April 30: Died.

*Post-mortem* examination showed purulent exudate in the subarachnoid spaces of the brain, more marked on the left side. The right auditory nerve was dark brown and necrotic. The whole right petrous bone was necrosed. The carotid artery and the jugular vein were also invaded by the necrotic process. The right hemisphere of the brain contained numerous abscesses scattered throughout the white matter. Cerebellum and hind-brain unaffected.

The conclusion was reached that the abscess in the brain had been caused by septic emboli arising from the wall of the internal carotid in its course through the petrous bone.

*J. K. Milne Dickie.*

#### Physiology of the Eighth Pair: Hearing and Equilibrium.—V. Cheval.

"*Revue de Laryngologie*," No. 12, June 30, 1919.

The author reviews the subject of the functions of the cochlea and vestibule. He regards the rapid component of nystagmus as similar to the tendon reflexes. The afferent nerve-fibres from the extrinsic muscles of the eye are supposed to reach the brain through the trigeminal. He found that injection of novocain into both orbits of a rabbit caused the disappearance of the rapid phase of vestibular nystagmus. Unilateral section of the trunk of the trigeminal sometimes suppressed the rapid phase. Section of both trigeminals always suppressed the rapid phase of vestibular nystagmus and transformed it into a persistent conjugate deviation. As the nucleus of the trigeminal is connected with the neighbouring nuclei of the third, fourth and sixth nerves, and as Sherrington has shown that contraction of one set of muscles produces a contraction of the antagonists, Cheval regards the rapid phase of nystagmus as comparable with the simple tendon reflexes. "As the rapid contraction of the antagonists occurs always suddenly and the sensations of kinæsthesia of the ocular muscles are transmitted by the trigeminal, it follows that the reflex of the rapid phase has a trigeminal origin."

*J. K. Milne Dickie.*

#### Two Cases of Labyrinthine Fistulæ.—A. Brindel. "*Revue de Laryngologie*," No. 12, June 30, 1919.

In the one case a radical operation had been performed eight years previously and the posterior wound had been left open, requiring constant dressing. Each dressing caused great vertigo. On operation a fistula was found leading to the labyrinth, but the site of the fistula is not stated. Curetting relieved the symptoms of vertigo, which had become intolerable before operation.

The second case was one of acute labyrinthitis occurring in a case of chronic otitis media. A radical mastoid operation was performed and the labyrinth fistula curetted. The site of the fistula is again not stated. Recovery uneventful.

*J. K. Milne Dickie.*

**Mastoiditis following Explosion.**—G. Bilancioni. "Il Policlinico," October 20, 1918.

Bilancioni has had the opportunity of observing numerous lesions of the ear from explosions of various sorts. These were particularly common in the areas of mountain warfare, where mining and tunnelling operations were being carried out. From the practical point of view he distinguishes the lesions which remain aseptic in their whole course from those accompanied by suppuration. In the second class the suppuration comes on early, persists obstinately for weeks, and is accompanied by very abundant reddish, creamy pus. There are large defects in the drum membrane and the mastoid cells are almost constantly involved. There is a profound alteration of the general state with considerable depression. At the commencement the temperature is almost always raised ( $38.5^{\circ}$  or  $39^{\circ}$  C.) and remains raised or remittent for some time. The mastoiditis is characterised by a wide-spread necrosis of the trabeculae of the mastoid with formation of sequestra.

The writer strongly recommends the wide-spread use of the steel eye and ear protector of Putelli for the prevention of these conditions.

*J. K. Milne Dickie.*

**Vertigo which makes one Hear (Angiospasme Labyrinthique).**—Marcel Lermoyez. "Presse Méd.," January 2, 1919.

A curious syndrome has been observed by Lermoyez several times. The patient becomes troubled with noises in the head, and gradually becomes dull of hearing and finally becomes almost completely deaf. The hearing seems irretrievably lost when suddenly a violent attack of vertigo occurs and in several hours the hearing returns.

Three very interesting cases are quoted by the author in which this course of symptoms occurred. One case had been deaf and greatly troubled with subjective noises in one ear for many years. At one time, when the noises were particularly bad, the hearing gradually became worse, and in several days was lost altogether on the one side. Suddenly he had a severe attack of vertigo with vomiting, etc. A few hours later the vertigo disappeared and left the patient hearing again normally. The same cycle of events recurred at long intervals, but finally the patient remained deaf.

Lermoyez points out that this syndrome is similar to Menière's syndrome, but the order of events is reversed. In discussing the cause of the symptoms he rules out middle-ear conditions. The question of hæmorrhage into the labyrinth is considered, but dismissed as improbable on account of the fleeting character of the symptoms. Working on an analogy with blindness due to a spasm of the ocular vessels, Lermoyez suggests that the train of symptoms is due to a spasm of the vessels of the labyrinth. Pain is represented in the auditory nerve by subjective noises and anæsthesia by deafness. Similarly vertigo is pain in the vestibular nerve.

In asphyxia of the extremities, where there is marked spasm of the vessels, the fingers "become dead" and lose their sensibility. If the circulation is briskly restored the vessels dilate, the fingers become blue, then red, and there is tingling and acute burning pain.

The deafness and vertigo are probably due to similar causes with the labyrinth.

*J. K. Milne Dickie.*

**On the Discriminative Power of the Ear for Sounds and Noises.—A. Stefanini.** "Arch. Ital. di Otol.," xxx, p. 2, May, 1919.

Stefanini gives a detailed description and calculations of a series of experiments carried out with the object of determining the minimal interval at which two sounds can be discriminated. He makes use of an electrical apparatus in which a swinging pendulum makes and breaks the current in passing two metal terminals. This interruption is heard as a short, sharp sound in a telephone ear-piece. If the pendulum falls from a high angle and hence passes the terminals rapidly a single click is heard. As the pendulum slows down the sound becomes prolonged, and later is heard as two consecutive sounds. The gist of this paper appears to be that the minimal interval at which the two sounds are heard by one ear distinctly is 0.015 seconds. When the first sound is transmitted to one ear and the second to the other ear the minimal interval at which the two sounds are discriminated is the same as above, namely 0.015 seconds.

*J. K. Milne Dickie.*

**On a Means of Rendering Romberg's Test more Evident.—C. A. Torrigiani.** "Arch. Ital. di Otol.," May, 1919.

The author's apparatus consists of a square of strong wire netting fastened to a stout frame which raises it above the floor a few inches. The patient stands on the centre of the netting, and any tendency to fall is accentuated by the elasticity of the netting. The idea is a very useful addition to our examination methods.

*J. K. Milne Dickie.*

### MISCELLANEOUS.

**The Psycho-Physiological Offices of Aeronautics.—G. Gradenigo.** "Arch. Ital. di Otol.," May, 1919.

An article describing the steps taken in the Italian Army to test the aptitude of aviators for flight, etc. Italy was one of the first of the Allies to take adequate steps in this respect. Soon after the commencement of the war a psycho-physiological laboratory was founded and placed under the directorship of Prof. Gemelli. An office for the examination of candidates for the air service was established and commenced to function in July, 1917, in Turin under Lieut.-Col. Herlitzka. Others were later founded in Naples, Rome, etc. These were staffed by scientifically-trained *personnel* and furnished with the best obtainable instruments of precision. Prof. Gradenigo was appointed inspector, and had the duty of co-ordinating and rendering uniform the work of the various laboratories and offices. These offices had the following functions:

(1) The examination for enrolment of the navigating *personnel*, pilots, observers, balloonists, etc.

(2) The temporary or permanent exemption from flying service.

(3) The re-admission to flying duty after a period of exemption.

(4) Control of pilots after certain accidents.

(5) Studies on the physiology and hygiene of man in flight.

Each office was divided into the following departments, each of which was in charge of specialised medical officers: General examination, eye examination, examination of ear, nose, throat and vestibular apparatus, physiological department, and psychical examination.

Since August, 1917, 20,000 individuals were examined, of which about 35 per cent. were rejected, and from the statistics of the flying schools since the establishment of these offices the proportion of pupils found unfit for flying has diminished from about 30 per cent. to a minimum. This is a proof of the efficiency of the methods adopted by these offices.

*J. K. Milne Dickie.*

**The Schick Test and Active Immunisation.**—J. S. Lawrence. "Albany Medical Annals," July, 1919.

The Schick test is used in cases of diphtheria contacts. It is simple to perform, and by means of it one can determine in thirty-six hours if the patient is susceptible to the disease or not. It is carried out as follows: An amount of toxin equal to  $\frac{1}{30}$  of a standard minimal lethal dose (M.L.D.) is diluted with  $\frac{1}{10}$  c.c. of sterile salt solution and injected into the layers of the skin of the forearm. If properly done a small white wheal results, which becomes a red spot in twenty-four hours. If the individual is immune, the slight inflammation passes away as quickly as does the control, which is made on the other arm by injecting the same amount of toxin that has been heated above 80° C. for three minutes. If there is no immunity the inflamed area increases for about forty-eight hours, after which it slowly disappears. After eight or ten days the spot turns brown and desquamates. Care must be exercised in performing the test that the injection is not made too deeply, as the result may be negative if that is done.

*J. K. Milne Dickie.*

**Municipal Control of Diphtheria, including Dosage and Methods of Administration of Antitoxin.**—F. W. Sears. "Albany Medical Annals," July, 1919.

The writer discusses diphtheria from the point of view of the public health officer.

As regards the administration of antitoxin Schick has shown that it has no value after the toxin has entered the tissue-cells, and that it should always be given early while the toxins are still circulating in the blood. Sears states that if one has given a sufficient dose at the beginning it is not usually necessary to repeat it. He works according to Schick's scheme of dosage, in which, in 90 per cent. of cases 100 units are given for each kilogramme of body weight. The antitoxin is usually administered subcutaneously, but in fulminating cases intravenous injections is preferable. One must first make sure that the patient is not asthmatic nor susceptible to horse odours. If the patient is susceptible, one should give  $\frac{1}{5}$  or  $\frac{1}{10}$  c.c. and wait twenty minutes. Double this amount may then be given, and after three-quarters of an hour the full dose may be given with safety. The writer has seen one death from anaphylactic shock in a patient sensitive to horse-serum. In the case of diphtheria carriers removal of the tonsils is recommended as the best means of getting rid of the bacilli. It is not dangerous to remove the tonsils even when there are bacilli in the crypts, but in cases of doubt a dose of antitoxin may be given just before. In dealing with contact cases and carriers Sears makes use of the Schick test to determine which cases are susceptible to the disease.

*J. K. Milne Dickie.*

**Sensitisation and Treatment of Bronchial Asthmatics with Pollens.**—I. C. Walker. "Amer. Journ. Med. Sci.," March, 1919.

This paper is the third of a series on the treatment of bronchial

asthma, the two others dealing with its treatment by proteins and vaccines respectively. The author's conclusions are that in patients who suffer from seasonal bronchial asthma caused by pollens, the asthma may almost with certainty be prevented provided that sufficient treatment be given before the beginning of the season. The treatment consists of various dilutions of pollen protein, ranging from the strongest dilution which fails to give a positive skin reaction to the strongest dilution which gives a positive reaction.

The treatment with pollens during the season is less reliable, but worth doing in cases in which much treatment preceding the season fails or cannot be given. In such cases very small amounts of the pollen protein should be given, as during the season the patient may encounter an unknown quantity in nature, and the addition to this of too large a dose in the way of treatment may give rise to serious trouble.

*Thomas Guthrie.*

**Poisoning by the New Gases from the Standpoint of Oto-Rhino-Laryngology.**—**Vincent.** "Rev. des Laryngol., d'Otol., et de Rhinol." July 15, 1919.

The chief subjective effects of gassing, whether by mustard-gas or arsenical gases, are loss of smell and taste and dysphagia appearing from the first to the third day, and dysphonia and coryza appearing about two days later. Spasmodic cough is more rare, as is also epistaxis. Glottic spasm and Eustachian infections are practically unknown.

The objective signs comprise variable degrees of congestion of the mucosa lining the nose, larynx, trachea, and the presence of ulceration and sloughs in different regions of the respiratory tract. The most constant situation of these is the anterior half of the true cords.

The prognosis as regards life is good. All the patients may be expected to be fit for military duty in from fifteen to forty days, but as regards the local condition the ultimate prognosis should be cautious.

The early treatment consists chiefly in prophylaxis against pulmonary infections. Locally all douches, gargles and sprays should be alkaline. A complete change of clothing at the outset is imperative.

*H. Lawson Whale.*

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### LIST OF ORIGINAL PAPERS.

**Acta Oto-Laryngologica**, vol. i, fasc. 1, 1918. (Abstracted by THOMAS GUTHRIE.)

BÁRÁNY, R.—"Some Eye and Neck Muscle Reflexes in the New-born."

BERGSTRAND, H.—"The Klebs-Löffler Bacillus."

SCHMIEGELOW, E.—"Contributions to the Pathology of Tuberculosis of the Bronchial Glands."

STRANDBERG, J.—"Investigations Concerning Ulcus Neuroticum Mucosæ Oris."

PONTOFFIDEN, FR. (Randers).—"Some Experiences of Maxillary Sinusitis."

Vol. i, fasc. 2 and 3.

HOLMGREN, G. (Stockholm).—"Ear Diseases and Lumbar Puncture."

**Albany Medical Annals**, July, 1919. (Abstracted by J. K. MILNE DICKIE.)