

## ABSTRACTS

### EAR.

*On Pseudo-Fistula.* C. O. NYLEN and J. KARLEFORS.  
(*Acta Oto-Laryngologica*, Vol. iii., fasc. 1 and 2.)

The authors have observed certain nystagmus phenomena in performing the fistula test on a number of patients who had no fistula. The test was performed in the ordinary way by means of a rubber bag with tube and nozzle, the pressure being controlled by a manometer.

(1) Compression is followed, after a latent period of from two to several seconds, by horizontal-rotatory nystagmus towards the compressed side; aspiration, by nystagmus towards the opposite side. There is distinct vertigo. (2) If the experiment is immediately repeated, the response is either absent or very feeble. (3) After an interval of one to several minutes the test is again positive as at first. (4) If aspiration precedes compression, no nystagmus follows. (5) The test becomes negative after a perforation of the tympanic membrane has healed. (6) Nystagmus is elicited in "non-fistula" cases only when the pressure reaches at least 50 to 60 mm. of mercury; more often 100 to 120 mm. or more is required. (7) With a constant pressure the nystagmus gradually increases in strength, and then diminishes and ceases after ten to twenty seconds' duration. It may then be followed by a nystagmus towards the opposite side, lasting from a few seconds to as much as forty-five. If the constant pressure is interrupted when the nystagmus towards the compressed side has ceased, there may also be a spontaneous reversing of the nystagmus towards the opposite side.

Of fifty cases with normal hearing only one gave a positive result. This was a woman of twenty-four with a normal ear on one side and chronic suppurative otitis media on the other. The test was positive on both sides. Of more than one hundred cases with suppurative otitis media, either chronic, acute, or residual, the pseudo-fistula test was positive in forty chronic, seven acute, and seven residual.

The writers consider that the genesis of this nystagmus phenomenon must be due to an impression on the yielding portions of the labyrinth which would cause a movement of the endolymph with accompanying irritation. They have more difficulty in explaining the reversal of the nystagmus during continued pressure, and also the fact that a second test is negative if it follows too soon after the first. They propound two theories, a "central" and a "peripheral," to explain these points, but are not quite satisfied that either of them does so completely.

THOMAS GUTHRIE.

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### NOSE AND ACCESSORY SINUSES.

*Further Investigations into Serious Complications arising from Puncture of the Maxillary Antrum. Experimental Researches on the Effects of the Introduction of Air into the Venous System.* R. GORDING. (*Acta Oto-Laryngologica*, Vol. iii., fasc. 1 and 2. Stockholm, 1921.)

The author has made a series of experiments with injection of air into the venous circulation in animals (rabbits), and has arrived at the conclusion that the dangerous antrum-phenomena as a rule may be explained on the basis of an air embolus. He assumes that the air bubbles, after having passed either through the pulmonary circulation or through an open foramen ovale, may have passed into the general circulation and there have carried out their effect as arterial air-emboli.

AUTHOR'S ABSTRACT.

*Three Cases of Choanal Atresia.* Dr JACQUES, Nancy. (*L'Oto-Rhino-Laryngologie Internationale*, July 1921.)

The writer describes these cases in detail, with operative technique, results, and summary. The patients were males, aged 19, 11, and 18 respectively. The condition of atresia was recognised, in the first two, by posterior rhinoscopy only, in the third, the obstructing partition was seen from the anterior nares. In the first two, the blockage was unilateral and complete, in the third it was complete on one side and incomplete on the other. The complete atresia was on the right side in all cases.

Operation, in the first instance, involved submucous resection of the septum, then the piercing of the obstructing curtain with a knife and enlarging the opening made with a punching forceps until the normal borders of the choana were reached. The operation was carried out through the anterior nares, the tip of the biting instrument being guided by a finger in the naso-pharynx. The nares was packed by a vaselined wick of gauze plugged into the posterior choana, and kept there, with occasional renewals, for about three weeks. The writer states that no ear or other complication arose from this procedure. After the final removal of the packing, the opening was maintained by daily passage of a urethral bougie of large calibre. When last seen by the operator, the patients were carrying out for themselves daily passage of the bougies, and were engaging in breathing exercises. He mentions that from time to time trouble arose from the exuberant growth of granulations round the edges of the wound.

Regarding the pathology of the condition, it was found that the partition was part-membrane, part-osseous. In two cases the point of least resistance was the vomero-palatine angle, while in the third, the sphenopalatine angle was weakest. The bone of the curtain was

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continuous with the bone of the body of the sphenoid, the fibrous portion with the periosteum.

Etiologically the cases were somewhat inconclusive. The first patient was of the strumous type, the second was of the neurotic diathesis, the third was a case of congenital syphilis. The conclusion arrived at was that congenital choanal atresia was of the same category as cleft palate and hare lip, a distant sequela perhaps of syphilis in the progenitors, a dystrophy rather than a cicatricial condition.

GAVIN YOUNG.

*Syphilis of the Accessory Cavities of the Nose.* VIGGO SCHMIDT. (*Acta Oto-Laryngologica*, Vol. iii., fasc. 1 and 2.)

The author, in 1918, met with two cases of syphilitic ethmoiditis in one of which there was also a syphilitic empyema of the maxillary antrum. Both had been regarded as ordinary cases of accessory sinus disease, but both presented a positive Wassermann reaction and were cured by anti-syphilitic treatment. After this the author had the Wassermann reaction carried out in all cases of sinus disease and observed five other similar cases which gave a positive reaction and cleared up under "specific" treatment, and, in addition, out of ten typical cases of nasal syphilis, six in which there was a co-existing sinus infection.

The syphilitic nature of a sinusitis is neither disproved by a negative nor proved by a positive Wassermann reaction, which forms a guide only. A sinusitis can only be regarded as certainly of syphilitic origin when "specific" treatment is followed by disappearance of all symptoms objective and subjective and of the opacity on transillumination and radioscopy.

In conclusion the author suggests that a systematic use of the Wassermann reaction will disclose in a fair percentage of cases of accessory sinus disease a syphilitic infection before the latter has assumed the characteristic appearances of syphilitic necrosis.

THOMAS GUTHRIE.

*The Sphenoidal Sinus and the Temporal Lobe.* J. PARSONS SCHAEFFER, M.D., Ph.D., Professor of Anatomy, Jefferson Medical College, Philadelphia, Penn. (*Journ. Amer. Med. Assoc.*, Vol. 76, No. 22, 28th May 1921.)

This paper deals with the anatomy of the sphenoidal sinus, particularly with the varying anatomical relationships which occur when the pneumatization of the sphenoidal bone extends into the neighbouring bones, the pterygoid processes, greater and lesser wings, the rostrum, and the anterior and posterior clinoid process. Extension into the occipital, palate, ethmoid, and maxilla are not uncommon.

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Special reference is made to the extension of the sinus sufficiently far into the great wing of the sphenoid beneath and lateral to the dural cavernous sinus so as to come into relationship with the temporal lobe of the brain. One cannot ignore the sphenoidal sinus as a possible factor in the temporal lobe abscess. PERRY GOLDSMITH.

*Studies in the Lymph Drainage of the Accessory Nasal Sinuses.*  
DRS MULLIN and RYDER. (*Laryngoscope*, Vol. xxxi., No. 3, p. 158.)

The authors point out that very little work has been done on this subject, and that most of it has been done after death, by injections under pressure. The series of experiments recorded was carried out on living animals. The frontal sinus of cats and the maxillary antrum of rabbits were chosen. The injection used was India ink, a suspension of finely divided carbon about the same size as cocci, and also insoluble. Inoculations of tubercle bacilli were made in the same way. The results go to show that the already accepted routes of absorption are correct. In the frontal sinus there was difficulty in keeping the ink sufficiently long without damming the frontonasal duct. The results demonstrate for lymphatic function the continuity of the nasal mucous membrane into all the cavities. From the posterior wall of the frontal sinus a communication with the dura was demonstrated. Injections made into the nasal passages were not absorbed by the lymphatics of the nose, but the lungs and bronchial routes were severely pigmented. The tonsil does not appear to receive drainage from any area beyond its own surface. ANDREW CAMPBELL.

*The Use of Scarlet Red Emulsion in Atrophic Rhinitis (Ozena).* (A preliminary Report.) Dr J. C. SCAL. (*Laryngoscope*, Vol. xxxi., No. 8, p. 628.)

An emulsion of scarlet red (biebrich azo-benzine) 4 per cent. with quince seed as its base is used. It is found to adhere closely to the mucous membranes in spite of the secretion. This treatment has produced relief from symptoms; whether this will remain permanent it is too early to say. The report is made to stimulate others to try the method. ANDREW CAMPBELL.

### LARYNX.

*High Tracheotomy.* CHEVALIER JACKSON. (*Surgery, Gynaecology, and Obstetrics*, May 1921.)

The author holds that of all operations tracheotomy is the worst done and inveighs against the current teaching of the technique of the operation.

He advocates a rapid two-step finger-guided low tracheotomy, splitting the front of the neck from the thyroid to the supra-sternal

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notch. The author is against any form of general anæsthetic, and holds that it needlessly endangers the patient's life.

High tracheotomy is the chief cause of laryngeal stenosis. In the after treatment of tracheotomy, the wound should be kept open and allowed to granulate from the bottom in order to allow the cartilaginous rings to unite.

MUSGRAVE WOODMAN.

*The Nerves of the Human Larynx.* T. F. M. DILWORTH.  
(*Journal of Anatomy*, Vol. lvi., p. 48.)

The investigator notes that English-speaking anatomists follow the classical description restricting the internal laryngeal nerve to a purely sensory function, and quotes Exner followed by continental anatomists as teaching that each laryngeal muscle has a double nerve supply from the superior and inferior laryngeal nerves.

His own description is based on a dissection of thirty-three larynges, and (omitting the relations he describes), his findings may be summarised thus:—

## I. External laryngeal nerve.

### (a) Constant branches, to

1. Crico-thyroid muscle.
2. Inferior constrictor muscle.

### (b) Inconstant branches

1. Join inferior laryngeal nerve.
2. Apex of lateral lobe of thyroid.
3. Join internal laryngeal nerve.

## II. Internal laryngeal nerve—two main divisions.

### (a) Larger horizontal branch; sheaf of four main twigs, to

1. Mucous membrane of lateral wall of the pharynx lateral to the glosso-epiglottic field.
2. Mucous membrane of vallecule.
3. Anterior surface of epiglottis and mucous membrane of the vestibule.
4. Anterior surface of epiglottis near attachment of thyro-arytenoid muscle and mucous membrane of false cord and region above it.

### (b) Smaller, descending branch, to

1. Muscles in the aryteno-epiglottic fold.
2. Mucous membrane.
3. Mucous glands on the posterior surface of the arytenoid cartilage.
4. (Sometimes two branches), inter-arytenoid muscle, a constant branch with definite twigs to the muscle and to the mucous membrane on its posterior aspect, but *none* to crico-arytenoid muscle.
5. A terminal branch piercing inferior constrictor to become continuous with inferior laryngeal nerve.

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### III. Inferior laryngeal nerve.

One inch before entering larynx it divides into two divisions.

- (a) Branches before or at division, to
  1. Trachea in course upward.
  2. Œsophagus in course upward.
  3. Thyroid gland where attached to trachea.
  4. Œsophagus just below its angle of junction to pharynx.
- (b) Smaller division enters with internal laryngeal = II. *b* 5 above.
- (c) Larger or muscular division, to
  1. Crico-arytenoideus posticus.
  2. Inter-arytenoideus.
  3. Crico-arytenoideus lateralis.
  4. Thyro-arytenoideus.

[*Note*.—The figures in the above table are those of the abstractor.]

Hence the inter-arytenoideus muscle is supplied from both superior and inferior laryngeal nerves by twigs which may communicate one with another but do not cross the middle line; the other muscles by the inferior laryngeal nerve only.

The author suggests this is a highly modified plexus arising from a strand separated from the vagus and represented by the continuous nerve joining the internal and recurrent laryngeal. T. B. LAYTON.

*Heliotherapy for Tuberculosis of the Larynx.* Dr KOWLER, Mentone.  
(*Bulletin d'Oto Rhino Laryngologie*, Paris, July 1921.)

The author describes his apparatus for holding a nickel laryngoscopic mirror in place. Briefly the mirror, and if desired a tongue depressor, are fixed to a modified gag: the patient is then placed in position facing the sun, with the face protected. Dr Kowler claims the following advantages:—

- (1) The surgeon need not be constantly present.
- (2) The patient is not fatigued by holding the mirror.
- (3) Accuracy, and the presence of ultra-violet rays in the reflected light greatly shorten exposure.
- (4) The apparatus is light, easy to apply and to adjust.

He claims that very remarkable results can be obtained by exposing the larynx to sunlight. E. WATSON-WILLIAMS.

*On a Fulminating Variety of Diphtheric Croup in Typhoid Fever: Malignant Diphtheric Œdema of the Larynx.* MAURICE JACOD.  
(*Acta Oto-Laryngologica*, Vol. ii., fasc. 4.)

During the epidemic of enteric which attacked the French armies at the end of 1914, the sudden forced evacuation of certain hospitals resulted in the association of 120 cases of typhoid with some cases of

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diphtheria. In spite of all possible precautions, of the 120 cases of typhoid 13 developed diphtheria, in 7 naso-pharyngeal, and in 6 laryngeal. In 4 of the 6 laryngeal cases, the disease was both clinically and anatomically quite unusual, being characterised by the surprisingly rapid onset of an enormous œdema of the larynx with hæmorrhagic effusion into the tissues, and a complete absence of false membrane or any kind of exudation. The local condition was moreover, accompanied by signs of a massive intoxication, so that tracheotomy, although it relieved the urgent dyspnoea, was followed by no general amelioration, and death occurred in less than twenty-four hours from the onset of the throat symptoms.

The diagnosis presented considerable difficulty, depending, in the absence of any trace of false membrane, entirely on bacteriological examination. The disease differed altogether from true laryngo-typhoid which is characterised by perichondritis and cartilage necrosis.

THOMAS GUTHRIE.

*Laryngeal Diphtheria.* JOHN F. HOGAN, M.D., Baltimore. (*Journ. Amer. Med. Assoc.*, Vol. lxxvii., No. 9, 27th August 1921.)

For the year 1919 and 1920 there were 246 deaths in the city of Baltimore due to diphtheria of various types, 82.11 per cent. were laryngeal.

From an analysis of these cases Hogan says, it appears quite evident that there is a tendency *not* to diagnose laryngeal diphtheria in time, and, when diagnosed, too great a delay is permitted before intubation is carried out. It is a great advantage to have intubated patients in a hospital when trained assistance is always at hand in case the tube should come out. In the fatal cases with laryngeal diphtheria only 101 or 50 per cent. were intubated. Five patients died while intubation was being attempted, 1 case received intubation, 3 were reintubated, 1 five times. In only 170, or 83.74 per cent., of these 202 fatal cases of laryngeal diphtheria was antitoxin given. In the writer's experience the death-rate from laryngeal diphtheria in intubated cases has ranged from 30 to 35 per cent.

Emphasis is laid upon the somewhat prevailing belief that diphtheria of the larynx cannot exist without coincident manifestations of the disease in the pharynx, nose, or naso-pharynx.

Great as is the admitted value of the serum treatment, it must be remembered that once laryngeal œdema develops to such an extent as to cause marked dyspnoea, antitoxin will not act quickly enough in this type of patient to overcome the necessity for intubation. From a study of the cases in Baltimore, the writer is convinced that the hope of a decreased reduction in the death-rate lies in earlier recognition and timely treatment with antitoxin and intubation.

PERRY GOLDSMITH.