

## Abstracts

necrosis of all soft tissue and bone in the mastoid. X-ray therapy in such a case would have been a matter of lasting regret.

Dr. MITMAN (in reply) said that he could not be held responsible for any therapeutic disagreement which members might have as a result of his remarks. All he had said was that in every case of otitis media he had found changes in the mastoid which he attributed to changes in the mucosa and that the patients in such cases could recover without operation on the mastoid.

With regard to early changes in measles, a paper would be published shortly by the L.C.C. in its *Annual Report on Measles*, concerning routine examinations of the drumheads in this disease, by one of the medical officers, and he would not attempt to anticipate this report.

He did not deny that radiography had some value in disease of the mastoid; it gave additional information which must be taken in conjunction with the rest of the clinical picture. It was of particular value in excluding infections of the middle ear, e.g. in cases of external otitis—in which there might be doubt as to whether the middle ear or the mastoid was infected. X-rays might show that there was no change in the mastoid process, and in those cases one could say that there was no infection of the middle ear and that the condition was external.

## ABSTRACTS

### EAR

*Fistula Sign on Catheterization.* ERNST URBANTSCHITSCH. (*Monatsschrift für Ohrenheilkunde*, lxx., 1936, 724.)

A case is described in which catheterization of the right ear produced a brisk nystagmus to that side with vertigo and falling to the left.

The patient, a 38-year-old waiter, had complained of deafness for eighteen years, tinnitus for six months and attacks of vertigo for four to six weeks. The last symptom was accompanied by nausea and sensation of rotation.

Examination revealed dry chronic middle-ear catarrh; no spontaneous nystagmus and no fistula sign on compression and rarefaction of air in the meatus. Wassermann reaction negative. Catheterization of left ear,—no nystagmus.

As the direction of the nystagmus was homolateral, it could not be due to the injection of cold air producing a caloric reaction. A definite explanation of the phenomenon is impossible, but it might be due to a dehiscence in the bony capsule of the inner ear.

DEREK BROWN KELLY.

# Abstracts

## NOSE AND ACCESSORY SINUSES

*Intranasal Exploratory Opening of the Frontal Sinus Floor.*  
E. I. MATIS. (*Monatsschrift für Ohrenheilkunde*, lxx., 1936, 656.)

In all cases of frontal sinus disease giving rise to difficulty in diagnosis, the author recommends his method of intranasal exploration.

Under local anæsthesia, a curved incision is made along the border of the pyriform aperture. The soft tissues covering the corresponding half of the nose and upper wall of the orbit are elevated subperiosteally, and retracted with special hooks until the floor of the frontal sinus is quite free.

The exploratory opening is made above the fronto-maxillary suture. The cavity of the sinus is then directly inspected. When findings are positive, the operation is extended according to the author's method.

DEREK BROWN KELLY.

*My Experiences of the Radical Treatment of Frontal Sinus Suppuration.* M. HAJEK. (*Monatsschrift für Ohrenheilkunde*, lxx., 1936, 641.)

After forty-five years of experience in dealing with cases of frontal sinus disease, the author has come to the following conclusions.

1. To advocate one standard method of treatment is wrong. Each case must be judged individually, and appropriate treatment selected.

2. The conservative intranasal method is sufficient in the greater number of acute and chronic cases when there is no involvement of the bony wall.

3. Simple trephining is indicated only when the bone is unaffected and the disease of short standing. Healing can only then result if intranasal drainage is free. In the absence of this an artificial duct must be made. Removal of the mucosa is contra-indicated.

4. In acute empyemas with orbital involvement, the roof of the orbit is exposed, and the abscess evacuated. Necrotic bone is removed, and the wide gap treated by the open method to ensure that the duct functions properly. The mucosa and the rest of the bony framework remains intact.

5. Similar complications of chronic sinusitis demand tactics as described in paragraph 4. Here, however, there are complications, as the bone may be widely involved and the mucosa irreparably

## Nose and Accessory Sinuses

damaged. According to conditions found, the method of Kuhnt, Killian or Riedel is employed, followed by a cosmetic operation one to two years later.

6. Unless absolutely necessary, no external operation should be performed. If unavoidable, certainty of healing should come before cosmetic result. A cosmetic operation can always be performed later.

DEREK BROWN KELLY.

*A Review of the Inter-relationship of Paranasal Sinus Disease and certain Chest Conditions, with especial consideration of Bronchiectasis and Asthma.* JOHN G. MCFURIN. (*Annals of O.R.L.*, 1935, lxiv., 344.)

After review of the relationship between nasal sinus infection and chest affections, the author gives the following indications for sinus surgery in asthmatics.

1. Sinus disease that would demand surgery, regardless of the existence of asthma.
2. Cases in which the removal of polyps or simple methods of drainage and ventilation have helped the asthmatic state, but in which such measures will not completely eradicate the sinus disease.
3. Cases in which recurrent attacks of rhinitis with exacerbations of the sinus disease seem to precipitate attacks of asthma.
4. Cases in which the patient has been proved sensitive to his own infection, but in which the local sinus pathology would not ordinarily require surgery.
5. Where sinus disease exists and it has been found that attacks of asthma can be relieved by cocainizing the sphenopalatine ganglion.

Reflex asthma is usually attributed to obstructive or pressure lesions in the nose or nasopharynx, such as adenoid hypertrophy, polyps, deviated septa, hypertrophied turbinates, and nasal synechia. Many asthmatics have been cured by relieving these defects. The explanation of reflex asthma as given by Sluder is probably correct. Irritation to the terminal sensory twigs of the sphenopalatine ganglion sets up impulses in that ganglion that are transmitted to the vagus, sympathetic, and portions of the trigeminus. Bronchial spasm can be the result of this reflex. There is no reason why infection in the sinuses should not cause sufficient irritation in the sphenopalatine ganglion to bring about this same reflex with a resulting broncho-spasm. This would serve as a good argument for doing thorough sinus surgery for the relief of spasmodic bronchial asthma of supposed reflex origin.

E. J. GILROY GLASS.

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## LARYNX

*Chronic Laryngeal Stenosis.* FRANCIS LeJEUNE and NEAL OWENS.  
(*Annals of O.R.L.*, 1935, lxiv., 354.)

The great majority of cases of chronic laryngeal stenosis are caused by infection of a wound in the larynx or upper trachea and healing with excessive scar formation. Treatment presents great difficulty and results in the past have frequently been unsatisfactory. There are four factors which in the author's opinion are responsible for these unsatisfactory results.

1. Chronic infection by contamination from saliva.
2. Chronic irritation from a retained tracheotomy tube.
3. Unsatisfactory epithelialization and healing from inability obliterate the dead space.
4. Rigidity of the segment, produced by the cartilaginous framework.

A method has been devised to minimize these difficulties and two cases treated in this way are quoted.

A laryngo-fissure is performed and all scar tissue removed, leaving the cavity of the larynx as nearly normal as possible. A stent is now made which completely fills this cavity. The stent is covered with Thiersch graft and inserted into the laryngeal cavity, leaving sufficient room below it for the tracheotomy tube. Two retention sutures are used to hold the stent in position but the laryngo-fissure wound is not otherwise closed. At the end of nine days the stent can be removed and the graft will be found to have taken satisfactorily. The stent, having been cleaned, is replaced in order to minimize as far as possible any further contraction. At the end of two months, although a certain amount of contraction will have taken place, a stage of equilibrium should have been reached—but the stent is worn up to the end of four months when it may be removed finally.

At this stage the edges of the wound are drawn together by strapping to enable the patient to breathe in a normal manner but it is regarded as wise not to suture the wound for some time, in order to facilitate inspection of the laryngeal cavity. After a further two months the wound is excised and closed.

In the first case the result was entirely satisfactory—the patient having no difficulty in breathing and the voice being of good quality.

In the second case all went well until eight days after the final operation when, unfortunately, the patient died from a pulmonary embolus. A *post mortem* examination in this case showed that there was no evidence of any laryngeal "obstruction".

E. J. GILROY GLASS.

# Pharynx

## PHARYNX

*Combined One Stage Closed Method for the Treatment of Pharyngeal Diverticula.* T. A. SHALLOW. (*Surgery, Gynæcology and Obstetrics*, lxii., 3, March, 1936.)

Tracing the history of pharyngeal diverticula, the writer notes that for many years it was erroneously believed that the site of origin was always a triangular area below the lower border of the cricopharyngeus muscle. True pulsion diverticula may arise in one of three situations: (1) Most commonly, on the right or left side, above the cricopharyngeus, extending to the mid-line and thus giving the radiographic appearance of a mid-line structure. (2) Below the cricopharyngeus and above the circular fibres of the œsophagus, in a weak area through which pass the inferior laryngeal nerve and a branch of the inferior thyroid artery. The latter structure may cause bifurcation of the extending pouch and, in consequence, a double sac; 35 per cent. of diverticulae arise in this area. (3) The least frequent site is through the lower portion of the inferior constrictor muscle where a branch of the inferior thyroid artery enters.

The commonest symptom of a pharyngeal diverticulum is dysphagia of varying degree. At first the patient can swallow after the pouch is filled but in the more advanced stage, the full pouch presses upon the lumen of the œsophagus and obstructs it.

Regurgitation of undigested food mixed with saliva is often the first complaint. Other patients complain of noisy deglutition so that they are obliged to eat alone. Hoarseness was present in nine of the seventy-six cases quoted. A palpable tumour in the neck is a relatively rare sign. Bronchitis is a frequent complication. Eighty-four per cent. of the cases were males and the average age was fifty-nine years.

Discussing the type of operation, the writers cannot confirm the alleged frequency of mediastinitis after the one stage operation. They have had no mediastinitis and no secondary hæmorrhage in any of their seventy-six cases, treated by operation in one stage. There were two deaths, one from pneumonia and one from uræmia. The use of the œsophagoscope is essential in the one stage operation, which reduces to a minimum the danger of rupturing the sac.

Rectal ether anæsthesia is advised. The incision extends from the hyoid bone to one inch above the sternum. After the œsophagus has been exposed and the trachea and thyroid retracted, the œsophagoscope is introduced and by its use the sac is isolated. The neck of even the largest diverticulum seldom exceeds half an inch in diameter. It is transfixed and ligated in the manner of a hernia and the stump is invaginated and covered by suturing the

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muscles. During this procedure the œsophagoscope is retained in the œsophagus.

DOUGLAS GUTHRIE.

### ŒSOPHAGUS AND ENDOSCOPY

*Unusual Cases of Cicatricial Stricture of the Œsophagus.*

HAROLD L. KEARNEY. (*Annals of O.R.L.*, xliv., 1935, 527.)

Four cases of Unusual Stricture of the Œsophagus are reported.

CASE I.—Child, aged  $2\frac{1}{2}$  years, who was admitted to hospital after swallowing sulphuric acid seven hours before. On admission there was marked laryngeal stridor and burns of the lips, mouth and face. Tracheotomy was performed immediately. Two days later, feeding by mouth being inadequate, gastrostomy was performed. On the seventeenth day, the tracheotomy tube was removed and a retrograde œsophagoscopy performed, a No. 12 (French) bougie was passed into the mouth, followed by a string which was retained. During the following year retrograde dilatation was carried out up to No. 40 bougie (French) and an œsophagoscopy at that date revealed a lumen so large that the location of the stricture was difficult to determine. The gastrostomy was allowed to heal.

CASE II.—A woman, aged 25, had, ten years previously, had an attack of scarlet fever, complicated by abscesses in the neck. Three months later she began to have difficulty in swallowing and when examined by the author, had a stricture 4 cm. below the cricopharyngeus which would only permit the passage of a No. 14 (French) bougie. Per-oral dilatation through an œsophagoscope was discontinued after four attempts, owing to pain and discomfort. Gastrostomy was therefore performed and retrograde bouginage carried out over a period of six months, followed by per-oral dilatation during the next two years: at the end of this time a 9 mm. œsophagoscope could be passed through the stricture without resistance.

CASE III.—A man, aged 45, came under observation for dysphagia of two weeks' duration. He had swallowed lye at two years of age and for five years following had been limited to a semi-solid diet. Œsophagoscopy showed a fungating malignant growth at the level of the previous stricture.

CASE IV.—A child, aged seven years, had an œsophageal stricture following a lye burn five years previously. For one year unsuccessful attempts were made by her physician to dilate the stricture by per-oral string-guided bouginage. For two years following this no treatment was carried out (except by a chiropractor who treated her by rubbing her stomach and throat!). At the end of this time she again came under observation and was treated by

# The Bronchus

retrograde dilatation up to No. 24 (French) bougie through a gastrostomy opening.

When she came under the author's supervision she weighed only 30 lb. and, on examination, had a stricture just below the cricopharyngeus.

Retrograde dilatation was commenced at No. 22 (French) bougie and in eight months had progressed to No. 40 (French) bougie. The child had in that period gained 10 lb. in weight and was able to eat almost anything.

E. J. GILROY GLASS.

## THE BRONCHUS

*Subcutaneous Emphysema as a Complication of Foreign Body in a Bronchus.* LOUIS H. CLERF. (*Annals of O.R.L.*, xlv., 1935, 364.)

Two cases of subcutaneous emphysema complicating inhalation of a foreign body are reported.

The first case, a child aged 21 months, had developed a swelling of the cheek secondary to a tooth infection. Five days later there was a cough with fever of 104.4° F. On the twelfth day, following a severe spasm of coughing, swelling developed in the neck, spreading rapidly to the face and chest, and it was found on examination that there was evidence of partial obstruction of the left main bronchus. Although bronchoscopy was regarded as hazardous, the operation was carried out and a portion of a pea-nut removed from the left main bronchus. The emphysema cleared rapidly and within ten days the patient had been discharged from hospital.

The second case, a child aged 14 months, choked while eating pea-nuts. Twenty-four hours later, following a severe spasm of coughing accompanied by cyanosis, swelling due to emphysema of the right side of the neck was noticed. The following day the emphysema had spread to the head and chest. Bronchoscopic removal of the foreign body was again followed by rapid and uneventful recovery.

The author quotes seven similar cases previously reported, in six of which the foreign body was of vegetable origin as in the two cases reported by him. The exact mechanism of the production of emphysema in these cases is not known as none have come to autopsy. Being of vegetable origin, damage to the wall of the bronchus is unlikely. It is probable therefore that the initial lesion is "an obstructive emphysema" of a portion of the lung, and that the spasms of coughing have ruptured the distended alveoli and forced air into the sub-mucosal and later, by spread, into the sub-cutaneous tissues.

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Removal of the foreign body releases the air-pressure immediately and prevents further spread. The absorption of the gas is rapid.

E. J. GILROY GLASS.

### MISCELLANEOUS

*Malignancy of the Upper Respiratory Tract and adjacent structures. Selection of treatment.* FREDERICK A. FIGI (Rochester, Minn.). (*Surgery, Gynaecology and Obstetrics*, lxii., 2A, February, 1936.)

Selection of the appropriate therapeutic agent for the treatment of malignant tumours of the upper respiratory tract requires a careful study of the nature and situation of the growth. In most cases biopsy will be necessary. Tumours coming in Grades 1, 2 or 3 of Broder's classification should be excised or destroyed with electro-coagulation. Grade 4 tumours, unless well localized, should be irradiated. In many cases it is advantageous to supplement surgery with radiation.

Buccal lesions are usually squamous-celled and should be excised with the cutting cautery or coagulated *in situ* followed by removal of the regional lymph nodes or block dissection if obvious involvement has occurred.

Malignant tumours of the jaws consist of epitheliomas, sarcomas and adamantinomas.

The epitheliomas should be destroyed *in situ* and the regional lymphatics must be dealt with. The sarcomas are treated by local destruction and intensive external irradiation. The adamantinomas rarely form metastases and are best treated by diathermy or resection.

The adenocarcinomas of mixed type which frequently occur in the palate are encapsulated and can usually be dissected out complete.

Carcinoma of the tongue, if operable, is treated by local excision followed by bilateral dissection of the submental and submaxillary lymph nodes and block dissection on the side involved. Gratifying results have followed the use of radium needles or radon seeds in inoperable cases.

The majority of malignant tumours of the tonsil are highly active epitheliomas and lymphosarcomas. The remainder are mixed tumours, sarcomas, and low-grade epitheliomas. The highly malignant growths are treated by the insertion of radium followed by external radiation. The inactive epitheliomas should be destroyed by diathermy with the immediate insertion of radon seeds. The regional lymph nodes are removed subsequently.

## Miscellaneous

Malignant tumours of the nasal fossae and sinuses are treated by electrocoagulation and radium, access being obtained by a lateral rhinotomy.

Malignant tumours of the nasopharynx are usually highly active epitheliomas and sarcomas which form metastases early and are very inaccessible. For these reasons irradiation is the method of choice.

Extrinsic malignant growths in the larynx are usually approached by some form of lateral pharyngotomy. For limited intrinsic growths thyrotomy is eminently successful. The more extensive lesions require complete laryngectomy.

W. H. BRADBEER.

### *Disappointing Results from the Ionization Treatment for Hay Fever.*

MAXIMILIAN A. RAMIREZ (New York). (*Jour. A.M.A.*, January 25th, 1936, cvi., 4.)

The writer and his associates in the Department of Immunology of the French Hospital studied a series of seventy-five cases, using the technique recommended by Warwick.

Twenty-five of these cases were of non-specific, perennial, vasomotor rhinitis which did not give a positive skin reaction to allergens ordinarily used in testing. In this group there was definite evidence of benefit and the vast majority were improved.

In the second group were fifty true, seasonal pollen, or so-called hay fever patients. In this latter group some were treated before the hay fever season opened, and others during the attack. In no case was there any relief and the writer concludes that "intranasal ionization treatment of hay fever has no merit".

ANGUS A. CAMPBELL.

### *A Study in the Act of Swallowing.* K. HEGNER. (*Arch. Ohr-, u.s.w., Heilk.*, 1936, cxl., 387-96.)

The author makes a distinction between swallowing after chewing ("Kauschlucken") and swallowing of a bolus of food which is placed in the midline on the back of the tongue ("reines Schlucken"). In previous studies of swallowing only "reines Schlucken" had been considered. Persons used in these investigations must be specially suitable subjects for laryngoscopy, allowing a good view of the valleculae and of the pyriform sinuses. They are given hazel nuts to chew and when they gave a sign to indicate that they felt the need to swallow, the pharynx and larynx were examined with the mirror.

The following observations were made. The masticated food passes down on each side of the epiglottis, the bulk of it on the side where the chewing habitually takes place (Kauseite), but a thin stream is nearly always seen on the opposite side also. Before the

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semi-liquid mass of food is actually swallowed it accumulates in the valleculae behind the tongue or in the pyriform sinuses or in both regions. The frequency of the various methods of swallowing is given in tabular form in a series of sixty-four observations.

The position of the uvula seems to be connected with swallowing in some cases. In patients who have been in the habit of chewing on one side for years, owing to defective teeth, the uvula frequently shows a tendency to be pulled over to the opposite side. This is due to the fact that asymmetry of the muscles of the tongue and soft palate has developed.

J. A. KEEN.

*Tonsillitis and Albuminuria.* O. DE WESSELOW, H. K. GOADBY and D. C. L. DERRY. (*British Medical Journal*, May 25th, 1935.)

Of 354 cases of tonsillitis, 14.4 per cent. showed definite early albuminuria and 6.2 per cent. late albuminuria.

From the urinary and clinical findings it would seem probable that focal nephritis occurred in thirty-five (10 per cent.) and diffuse glomerulo-nephritis in at least three (0.8 per cent.).

No correlation was found between predominance of hæmolytic streptococci in the throat at the time of the acute infection and the incidence of focal nephritis.

Seasonal variations of external temperature did not appreciably affect the incidence of early or late albuminuria.

The incidence of predominant hæmolytic streptococcal infection in the throat was not greater in those patients who afterwards complained of "rheumatic" pains than in the general series.

R. R. SIMPSON.

*Movements of the Soft Palate.* W. E. M. WARDILL and JAMES WHILLIS. (*Surgery, Gynaecology and Obstetrics*, lxii., 5.)

The movements of the soft palate and the adjacent structures were studied in a patient in whom a large opening existed in the orbit and lateral nasal wall following the removal of a growth. The palate was examined at rest, and during speech, deglutition, and blowing.

The dimensions of the nasopharynx with the palate at rest are smaller than might be supposed. It was noted that the transverse diameter was about two centimetres and the antero-posterior measurement at the nasopharyngeal isthmus was less than one centimetre.

Speech is closely connected with the mechanism of nasopharyngeal closure. Closure of the nasopharynx is brought about by the collective actions of certain muscles assisted by the heaping

## Letter to the Editor

up of the overlying mucosa. The salpingo-pharyngeal muscles contract and stand out as folds which narrow the transverse diameter. The levator muscles sling the palate upwards and backwards to meet the ridge of Passavant which is produced by the contraction of the transverse fibres of the superior constrictor muscles. During continuous speech the palate remains elevated but still a measurable distance from the posterior pharyngeal wall, complete closure seems to occur below the limits of vision.

During deglutition the palate rises as in speech but as the bolus passes over the back of the tongue the palate is flattened out by the action of the tensor muscle.

Blowing out the cheeks causes the maximum elevation of the palate and contraction of the walls of the nasopharynx.

W. H. BRADBEER.

## LETTER TO THE EDITOR

### THE NASO-PULMONARY REFLEX

TO THE EDITOR,

*The Journal of Laryngology and Otology.*

SIR,—In the discussion after his paper on this subject (*Journal*, June, p. 409) Mr. Maxwell Ellis, basing on his experiments on dogs and on anatomical considerations, doubts the possibility :—

(1) of an ipsilateral bronchial reflex from stimulus to one nostril and

(2) of peristaltic movements in the bronchi.

He will find evidence for both in *Otologica Slavica*, December, 1932 (iv., pp. 173, 186).

As to ipsilateral reflex I have several times in asthmatics seen clinical evidence suggestive of this and mentioned it in the first edition of my book on asthma (1913). Brown Kelly, Prof. T. K. Monro in this country, La Forge in America, Hofbauer in Vienna and others have expressed themselves in the same sense. However, in the journal named and also in an article which he kindly contributed at my request to a symposium on asthma in the *Medical Press and Circular* (May 15th, 1935, p. 476) Prof. Sercer of Zagreb records the results of his long-continued experiments on laryngectomized men—not on dogs—conclusively proving, among other things, the existence of an ipsilateral reflex and that the clinicians have been right. Mr. Ellis himself remarks on the