current was turned on, a ring of tissue around the wire was coagulated and destroyed. The extent of the ring depended on the strength and duration of the current. As the tissue was permeated with antiseptic zinc ions sepsis did not result. The treatment was carried out under a local anæsthetic and it was not necessary for the patient to go into hospital or cease his work. No after-treatment was given. A contraindication of this method was a thick naso-antral wall.

A. Eidinow (in reply) said that he had had the opportunity during the last three years of treating about fifty cases of toxic arthritis in which the tonsils had been suspected as the focus of infection, and he had tried to remove the tonsils by diathermy. All these cases clinically did well, but he was disappointed with the bacteriological results. He found the same types of streptococci prevalent after removing the tonsils as before.

H. V. Forster (in reply) said that it had still to be decided whether it was of real practical importance in heliotherapy to choose a light source as near as possible to sunlight, because the air-cooled mercury vapour lamp, which did not fulfil these requirements exactly, was nevertheless more convenient to use.

### ABSTRACTS

#### EAR

On the development and structure of the Pyramidal Cells. A. RAINER. (Arch. Ohr-, u.s.w. Heilk., 1938, cxvl, 3-49.)

A series of twenty-one petrous temporal bones were studied histologically by serial sections. Some of the specimens were obtained from subjects without middle-ear disease, others from subjects who had died from the complications of middle-ear suppuration. The author concludes that air cell formation in the petrous pyramid is not the rule, even when the mastoid air cells are fully developed. Pneumatization of the petrous part of the temporal bone must still be looked upon as an unusual condition, associated with an excessive activity of the mucous membrane. A greater or lesser tendency of the tympanic mucosa to penetrate into the bone is the main reason for differences in the degree of pneumatization. This varies in each individual and is an inherited factor. A second factor is the type of bone structure. The mucous membrane can form air cells only when there are sufficiently extensive marrow spaces into which the mucous membrane can penetrate.

The upper, posterior and subarcuate group of pyramidal cells start from the region of the mastoid antrum. The lower and anterior group develop from the floor of the tympanic cavity and from the region near the opening of the Eustachian tube. Pneumatization of the petrous bone begins in the third year and can continue into old age. The most extensively pneumatized petrous bones are found in old persons. The article is freely illustrated.

J. A. KEEN.

Healing in Radical Mastoid Cavities. WALTER MALIN (Leipzig). (Zeitschrift für Hals-Nasen-und Ohrenheilkunde, April 1st, 1938.)

The paper is based on 290 cases from the Leipzig Clinic between the years 1926-35 and a report of 198 done in the Great War during 1915 at a base hospital at Ghent.

The whole series showed 73.7 per cent. of primary healing.

This compares closely with the results of Grünert in 1896, who reported 74.2 dry cases, and shows that even in these days when approach can be made through the external meatus there is no great improvement in results.

F. C. W. CAPPS.

Hearing Defects in Diphtheria, Scarlet Fever and Measles. RUDOLF KÖNIG (Leipzig). (Zeitschrift für Hals-Nasen-und Ohrenheilkunde, April 1st, 1938.)

In a survey of 3,268 cases there were ear complications in  $13 \cdot 2$  per cent. But in only  $0 \cdot 91$  per cent. of the whole or  $6 \cdot 8$  per cent. of those with aural complications was there any lasting defect of hearing, probably of the conductive type.

Toxic trauma to the inner ear or nerve was not demonstrated in any case and the conclusion is drawn that there is no interference with hearing without otitis media. Certainly none were found in this series. On the other hand these three diseases are so often accompanied by otitis media that one would expect it more often.

Toxic lesion of any other cranial nerve was always followed by complete recovery. This is a further reason to suppose that linking of deafness with one of these diseases is not permissible unless there has been an otitis media.

F. C. W. CAPPS.

#### NOSE AND ACCESSORY SINUSES

A rare case of Melanoma Malignum. J. Zubkus (Kaunas). (Monatsschrift für Ohrenheilkunde, 1938, lxxii, 559.)

The patient, a 14 year old schoolboy, complained of nasal obstruction and repeated epistaxis of six months' duration.

On examination, the right side of the nose and the nasopharynx were found to be filled with blood clot and pus. After cleaning, the right choana appeared to be blocked by a red irregular tumour whose origin was eventually traced to the upper surface of the soft palate. There was no hardness or infiltration of the palatal tissues surrounding the growth. In the right side of the neck a glandular mass was present. This was removed and on examination proved to be a melanotic sarcoma.

To deal with the mass on the upper surface of the soft palate, the right inferior turbinate was resected, after which a view into the

to each other and to the width of the nose was emphasized and it was shown that a wide nose was found in 20 per cent. On the other hand it is certain that 20 per cent. of normal adults do not have ozoena and there seems no reason to suppose that a congenitally wide nose predisposes to the disease, nor does a wide skull or face.

The growth of the maxilla with enlargement of the antrum is chiefly in the sagittal direction.

The alveolar process is pneumatized in about 25 per cent. of cases with a deep canine fossa, whereas normally the alveolar process shows a recessus alveolaris in about 40 per cent. of cases. This is important to note in operative procedures. These 25 per cent. of cases are those in which the floor of the antrum lies above the floor of the nose and leads to difficulty in puncture. In 12 per cent. of cases the alveolar recession extends towards the mid-line and pneumatizes the floor of the nose.

The development of the antrum and frontal sinus is somewhat parallel and generally the volume of the antrum is smaller in cases in which the frontal sinus is less developed. On the other hand it was found rather large in total absence of the frontal sinus.

The author shows for the first time a comparison between the pneumatization of the mastoid and maxillary antra and proves the relationship by several graphs. It is clearly shown that this relationship exists only during early development and later development is independent in the two cavities.

F. C. W. CAPPS.

Diseases of the Nasal Sinuses in Children. P. CARLO MONTI. (Bollettino delle Malattie dell' Orecchio, della Gola e del Naso, 1938, lvi, 121.)

The author discusses the development of the nose and sinuses in the new-born and in children up to eight years old.

The frontal sinus is not obvious up to two years and at the age of six is the size of a green pea. The maxillary antrum is present at birth, increases till three or four months of age, and then remains much the same until the fifth year.

The ethmoid cells are present at birth and grow but little until about the fifth year. The sphenoidal sinus is present at birth as a very small depression and grows steadily throughout childhood.

The author quotes Bouchet as saying that true sinusitis is rare before the sixth or seventh year and that the so-called sinusitis of infancy is in reality an osteitis, beginning around the tooth germs and spreading to the upper jaw as an osteomyelitis. From one to four teeth may be involved and there may be considerable sequestration. Treatment of this condition should be limited to a small incision to let out pus and to the extraction of the diseased tooth germs with a curette.

# Nose and Accessory Sinuses

The evidence of sinusitis in children is overlooked nine times out of ten when the child has only a little catarrh in the post-nasal space. When complications occur they are found in nine cases out of ten in the orbit. Le Mée is quoted as saying that 80 per cent. of children with the adenoid syndrome have some sinusitis and that the adenoiditis is secondary.

The author suggests that Proetz's method of displacement should be more widely used in children, both for diagnosis and for treatment.

F. C. ORMEROD.

Rhinosporidium Seeberi: an ætiological agent in the production of Nasal Polypi. J. G. Pasternack and C. S. Alexander (New Orleans). (Arch. of Oto-laryngology, June, 1938, xxvii, 6.)

Rhinosporidioses as a cause of polypoid growths in the nose would probably prove to be commoner than is imagined, if all nasal polypi were submitted to histological examination. It was first reported in Argentina by Seeber in 1892 and two years later O'Kinealy described a case in Calcutta. Ashworth (1923) expressed the view that the parasite belonged not to the sporozoa but to the lower fungi. The disease has been observed in many parts of the world. A study of the literature reveals that many cases have occurred in India and Ceylon, eight cases are of South American origin, only one case has been found in Europe (Italy) and six cases, including the case now reported by the writers of this paper, were from the United States of America.

The polypus is usually single, arising by a pedicle from the septum or the floor of the nose, though it may arise from any site within the nose. It is red or purple in colour, rough and papillomatous on the surface, and bleeds readily when touched. Sprinkled over the surface, but more apparent in sections, are numerous little white nodules, the sporangia. Spores are discharged in the nasal secretion and may infect the skin or mucosa of other parts of the body, such as the conjunctiva (sixteen cases reported), the pharynx (six cases), the face, neck and scalp (four cases). Experimental inoculation of animals has not been successful.

The disease most frequently attacks young males and the chief symptoms are progressive nasal obstruction, then mucoid discharge and epistaxis. The infection is probably water-borne, but no animal carrier has been discovered. The disease, however, has been observed in the nasal cavities of horses and cattle. The polypus readily recurs after snare removal. Excision must include an area of healthy surrounding tissue. The article is illustrated by three micro-photographs.

Douglas Guthrie.

#### **PHARYNX**

Dysphagia caused by an Anomaly of the Styloid Process. LOUIS ABRAMOWICZ (Warsaw). (Les Annales d'oto-laryngologie, May, 1938.)

It was the following case which first attracted the author's attention to the point at issue: A man of 48 complained of slight difficulty in swallowing of two years' standing. He had a sensation of a foreign body at the back of the throat on the left side. There was no acute pain but occasionally a twinge shooting into the left At one time the case was regarded as one of cancer and at another as a neurosis. There were no physical signs beyond a slight asymmetry of the soft palate. The left side appeared to be a little more filled up. Digital examination (which was made to rule out a tonsillolith) revealed a bony projection which ended at the lower pole of the tonsil. The patient confirmed the fact that pressure over the bony proliferation corresponded with the area where he had felt a foreign body. Radiology confirmed the diagnosis. The author discusses the various views which have been published to explain the genesis of this anomaly. Although the general treatment of these cases is briefly referred to, there is no mention of the treatment which was carried out in this particular case

M. VLASTO.

#### **BRONCHUS**

Malignant Tumours of the Lung and Broncho-Pulmonary Suppuration. L. PIETRANTONI. (Archivio Italiano di Otologia, 1937, xlix, 166.)

Professor Pietrantoni describes three cases of malignant new growth in the lung, associated with chronic suppurative processes.

The first case was that of a man of 46 years who had been treated for an epithelioma of the lip three years previously. For nine months before admission he had had a cough, and for two months had brought up sputum which gradually became purulent and was stained with blood. The general condition was very poor. He had a raised temperature on admission, but this subsided. X-rays showed complete opacity of the left lung and a bronchogram, a complete occlusion of the left main bronchus.

The bronchus was found to be blocked by a mass which proved to be an epithelioma. The patient died following an empyema. At autopsy the left main bronchus was blocked by the growth, but beyond that there were several large abscess cavities and the lung was in a state of chronic suppuration.

The second case was that of a woman of 64 years with a history of cough and recurring attacks of bronchitis with occasionally blood-stained sputum. X-rays showed a right sided pleural

### Bronchus

thickening but no more. Seven months later a further radiogram showed a pulmonary abscess with a fluid level and inclusion of air. The patient's condition was deteriorating and after various kinds of treatment had been tried a bronchoscopic examination revealed compression of the right main bronchus by a growth lying outside the bronchus. Autopsy showed a large growth of the right upper lobe which infiltrated the mediastinum and the right bronchus.

The third case was that of a man aged 61 who had had bronchopneumonia a year previously. He had continued to expectorate profusely and was diagnosed as a case of bronchiectasis, which diagnosis appeared to be confirmed by bronchography. A bronchoscopic examination revealed an ulcerating growth in the left main bronchus. Autopsy showed a large growth surrounding the bronchus and numerous abscess cavities in the lung.

The author uses these three cases as examples of how conditions which appear to be suppurative are in reality malignant growths with superadded sepsis. He says that even bronchographic X-ray examination will not always reveal the true state of the lung, and he insists that all long standing inflammatory conditions should be examined with the bronchoscope. Only by this means are the cases likely to be diagnosed early enough to allow of any chance of successful treatment.

F. C. ORMEROD.

Vegetable Foreign Bodies in the Lower Air Passages. Gabriel Porto. (Revista Oto-Laryngologica de S. Paulo, January-February, 1938, vi, 1.)

The writer gives detailed histories of forty-eight cases which have been under his care at his clinic. No less than 75 per cent. of all cases of foreign bodies in the lower air passages were of vegetable nature, consisting for the most part of coffee beans and various plant seeds. In Chevalier Jackson's experience the percentage is 50.

Of the forty-eight cases, twenty-eight were children under three years of age, seventeen were children over three years, and three were adults. Tracheotomy was performed in twenty cases, in eight of which it was an emergency operation for the relief of asphyxia. The foreign body was removed by the peroral route in thirty-five cases.

There was one case of pulmonary atelectasis and one case of mediastinal emphysema. The latter was successfully treated by cervical mediastinotomy; the operation is discussed in detail. The mortality of the series was 2 per cent. (four cases), including two cases of asphyxia, one case of bronchitis and one case of bronchopneumonia.

The article is a lengthy one (72 pages) and there is a bibliography of 120 references.

Douglas Guthrie.

A simple method of Bronchography in Children. N. M. JACOBY and G. KEATS. (Lancet, 1938, ii, 191.)

The authors discuss the difficulties of bronchography and its rarity before 1935 owing to the danger of infiltrating the neck with lipiodol. They describe the technique of a new and simple method and emphasize that in children if lipiodol is introduced into the pharynx under general anæsthesia it must enter the trachea. In thirty-four cases this principle has been applied to bronchography, the children being anæsthetized with avertin and ether and the lipiodal injected into the pharynx through the mouth with a syringe and cannula. The method has been found both satisfactory and free from danger.

Macleod Yearsley.

#### **MISCELLANEOUS**

Tonsillectomy and Vitamin C. M. BAER (Biel). (Monatsschrift für Ohrenheilkunde, 1938, Ixxii, 383.)

Vitamin C, the antiscorbutic factor, is normally obtained in sufficient quantities from food. Under-nourishment and overwork can readily reduce the intake until a hypo-vitaminosis results.

In tonsillitis, as in other infective processes, an increase in the use of Vitamin C by the body occurs. The dysphagia accompanying tonsillitis may account for diminished intake of the vitamin. Further reduction in absorption may be expected from gastroenteritis consequent upon the swallowing of septic matter. Using the urine examination method, an investigation of forty patients in whom tonsillectomy was indicated, revealed a deficiency of Vitamin C in all of them. A detailed description of a case and a number of references on the subject are appended.

DEREK BROWN KELLY.

Strabismus and Adenoids. P. Mangabeira-Albernaz. (Revista Oto-Laringologica de S. Paulo, March-April, 1938, vi, 2.)

The case is reported of a child aged ten years who had suffered from strabismus for five years. Corrective glasses relieved the condition but it was at once manifest if the spectacles were discarded. After removal of adenoids and tonsils the strabismus disappeared completely and has remained cured for over a year. The relationship between strabismus and adenoids has already been noted and the writer quotes twelve references on the subject.

Douglas Guthrie.

What is it necessary for the Ear, Nose and Throat Surgeon to know about normal and abnormal voice production? A paper by M. NADOLECZNY for discussion at a meeting at Bonn by the Society of German Ear, Nose and Throat Surgeons. (Zeitschrift für Hals-Nasen- und Ohrenheilkunde, April 1st, 1938.)

The author undertakes a most complete survey and omits no aspect of his subject.

# Miscellaneous

The paper is best outlined by its headings and is noteworthy for the "avoidable mistakes" which close many of the discussions.

Development of voice production is considered

- (a) In infants and children.
- (b) At puberty.
- (c) In adults.

The normal adult voice is discussed in talking and singing and also the senile voice, with disturbances in function and the causes of hoarseness in children.

Under the heading "Pathological Breaking of the Voice", usually occurring in males and only very occasionally in females, the author says:

- (1) The voice may not change at all—eunachoid.
- (2) There may be a persistence of only high pitch falsetto.
- (3) There may be a prolonged period of mutation.

Treatment depends on the form. Tumours should be removed, in the eunachoid form hormones are indicated and in others re-education.

The mistake should not be made

- (1) Of mistaking catarrhal changes for the cause, they may be the result of dysfunction. Do not say "just catarrh".
- (2) Of sending the patient home when over 16 and telling him not to worry. It does not improve by itself.
- (3) Of treating by Faradism without supervision and re-education.
- (4) Of mistaking mutation falsetto and huskiness for true hypo-gonadal syndromes and treating by hormones.

On the other hand, do not put off hormone treatment too long in a true hypo-gonadal case.

(5) Of operating on the external muscles of the larynx.

Voice disturbances in public speakers, singers, etc., are grouped as "dysarthrias".

Prominent in their symptomatology are: pain and parasthesias, swallowing, lip-moistening, etc., lassitude, psychoneurotic syndromes.

The author emphasizes again that chronic laryngitis may be a sequela of functional disturbance and that paresis of intrinsic muscles may follow an inflammation or be an early symptom of tuberculous infection.

There may be: tiring voice—expression of faulty production—clearing of throat and coughing—depressive and anxiety states—spasm of false cords due to psychogenic causes—or, just a severe catarrh of the larynx.

Stroboscopy shows up disturbances of the vocal cord movements otherwise invisible.

In the investigation of these conditions it is essential to test the voice of the patient in its vocational capacity, speakers should make a speech, singers should be made to sing, and soldiers, etc., to shout words of command.

Disturbances of the ordinary speaking voice are rare in comparison with those in singers and other vocational use.

Warning is given against: the missing of psychic causes (very common in artistes)—mistaking for an ordinary catarrh—missing septic foci—treating with local irritant drugs (even menthol)—giving the patient an exaggerated picture of his trouble—insisting on a long period of silence—transference to teachers of voice production without a knowledge of their method and control of the patient's progress—the performance of operations on the turbinals—the use of faradism and massage, especially in cases of hyperkinesis—allowing to sing too soon after respiratory diseases such as influenza— allowing to sing "because there is no obvious local lesion". Don't miss the strain of excessive singing and hereditary factors.

A special section is devoted to the discussion of nodes and their treatment which should follow the lines of—

A short period of silence.

The insufflation of anæsthesia and tannin.

The suppression of throat clearing.

The following of any lengthy period of silence by re-education.

Finally removal by cautery (but not as chemical beads or probes) or by excision.

Any operative procedure must be followed by re-education.

Illustrative cases are quoted.

Spastic dysphonia is, in the author's opinion, very rare. Such cases can often sing but not talk.

Hysterical aphonia must be treated by persuasion.

In laryngeal paresis the mistake should not be made of waiting too long before re-education. Faradism is best avoided.

In cases of post-operative or pathological deformity false cords are often found which produce a useful voice.

Speech in the laryngectomized is discussed, the essential for a good pharyngeal voice being to persuade the patient before operation that he will be able to produce sounds. Plastic operations must, of course, be performed with epilated skin.

Education of the deaf and dumb and the correction of disturbances of speech such as stammering, lisping, and nasal intonation (open and closed) are fully dealt with, and a very full and ingenious technique for the testing of the hearing in infants is given. The testing of the mentally defective is also discussed.

F. C. W. CAPPS.