

## ABSTRACTS

### EAR.

*Observations on Gradenigo's Syndrome and on examples of it at the Sabbatsberg Clinic.* Y. JUNGERT. (*Acta Oto-Laryngologica*, Vol. xvi., Fasc. 2-3.)

Since the year 1918 nine typical cases of Gradenigo's syndrome have been met with at the Sabbatsberg Clinic. Most of the patients were comparatively young, 77 to 78 per cent. being under forty years of age.

The sixth nerve paralysis and the pain usually began rather suddenly, about four to six weeks after the beginning of the acute otitis media, and in five of the cases the syndrome did not appear until after the performance of a mastoid operation, the interval varying from two to seven weeks. The persistence of the sixth nerve paralysis varied from one to eleven weeks, but in most cases it lasted for about a month. Its duration did not seem to be correlated with its early or late appearance in the course of the otitis media. Fever was absent except in one case which was complicated by sinus thrombosis and pyæmia. Signs of meningeal irritation were present in five cases, in the shape of increased pressure of the cerebrospinal fluid, and in four of these its cell-content was also raised.

In three of the cases abscess cavities were found in the apex of the petrous pyramid, and in two of these destruction of the apex had been shown by X-rays previous to operation.

The author concludes that in all cases the syndrome was caused by an osteitis of the apex of the petrous bone resulting from the extension of an acute otitis media; in only three, however, did the process go on to abscess formation. Disease of the petrous apex may occur without the sixth nerve paralysis characteristic of Gradenigo's syndrome, as happened in four cases treated in the Clinic, in which meningitis was shown at the post-mortem examination to have originated from disease of the apical cells.

These facts suggest that in cases which do not run a normal course after mastoid operation, attention should be directed to the apex of the petrous bone, particularly by means of X-ray examination.

On the whole, the prognosis in Gradenigo's syndrome is favourable and most cases recover without formation of an abscess in the apical cells. When, however, changes in these cells have been demonstrated by X-ray examination, it is not sufficient to be content with a mastoid operation, but one should proceed to drain the petrous apex, even although this involves sacrificing the labyrinth.

THOMAS GUTHRIE.

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*A Few Cases of Peripheral Facial Palsy.* Dr. SARGNON. (*Les Annales d'Oto-Laryngologie*, September 1931.)

Of the 14 cases seen by the author in the course of the last two years, two were congenital (normal delivery), three were traumatic, three were "a frigore" or Bell's palsy, and six were otitic in origin.

Of the traumatic cases, two were due to fracture of the petrous bone. In one of them the paralysis only came on three days after the accident and after complete cessation of the meatal hæmorrhage.

In one otitic case, paralysis followed four days after the removal of a plug of cerumen. The paralytic phenomena subsided in all these cases. In conclusion, the author remarks on the comparative rarity of the condition, and considers the affection to be less serious than is generally supposed. He stresses that in every case a thorough otological examination should be carried out.

The clinical reports on these 14 cases are detailed.

M. VLASTO.

*The Lesions produced by the Intracheal Injection of Medicated Oils.*  
Dott. Prof. ERNESTO PALLESTRINO and Dott. ELIA ALBANESE.  
(*Archivii Italiani di Laringologia*, September 1931.)

The authors carried out a series of experiments on animals in which they injected oily fluids into the trachea and into the larynx. They used a solution of vaseline, menthol eucalyptol, gomenol and Indian ink in olive oil, and they injected two cubic centimetres on alternate days.

From these experiments they have drawn the following conclusions:—

1. The instillation of oily substances into the trachea is difficult to carry out as a really efficient therapeutic measure, and does not constitute a method of choice for cure of affections of the respiratory tract. The action of gravity, associated with active aspiration provoked by the act of inspiration immediately after the injection, causes the injected fluid to accumulate in the lowest part of the lung. It is difficult to keep the fluid in any part of the lung, as with each cough some of it is forced into the trachea and aspirated into some other part of the lung.
2. The main mass of the liquid collects in the most dependent parts of the lung, whence it is eventually absorbed, little being expelled by cough.
3. A definite area of lung tissue, depending on the quantity of oil injected, is placed out of action as regards respiration.

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4. The sojourn of oil in the larynx is very short and of very slight value therapeutically. In fact, the endotracheal injection is not innocuous to the lung parenchyma nor to the smallest bronchioles. In animal experiments lesions of the mucosa have been demonstrated after injections.
5. Absorption of the fluid is easiest through epithelium that is injured or inflamed, but it can take place through normal mucous membrane.
6. Insoluble substances are deposited in the lowest part of the pulmonary tract, whence they are very gradually removed by phagocytosis and eventually deposited in other organs, especially the spleen. Some of the substance is also removed by lymphatic drainage. F. C. ORMEROD.

*Hearing in a Noise.* BERNHARD LANGENBECK (Leipzig). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band 30, Part I, p. 1.)

Logically, we should test hearing in the midst of noise, not in quiet rooms. Many sufferers from otosclerosis or chronic middle-ear catarrh have the feeling that they hear better in a noise. On the other hand, those with nerve deafness or senile dullness of hearing insist that they are unable to hear in the midst of noise of such slight intensity that it is difficult to believe them if the hearing is tested in the ordinary way. The author rejects the view, so often expressed, that outside noise mobilises the joints of the ossicular chain and so makes the hearing better. According to Löwenberg, paracusis occurs only in those, both of whose ears are dull and whose hearing for high-pitched tones is well preserved. Langenbeck agrees with von Troeltsch that most paracusics are mistaken in thinking that they hear better, when in reality the normal hearing speaker is more deafened than the patient and unconsciously speaks louder in consequence. Langenbeck has made experiments with an electrical machine for actuating apparatuses for the production of noises of various pitch, such as are met with in the day's work. He tested with pure tones and also with speech on normal persons, both by air- and bone-conduction, getting curves for both by means of the otoaudion. In general, the tone-hearing was most diminished in those parts of the scale in which lay the greatest "partial" tone intensity of the disturbing noise. He found as a rule that, apart from the region of the deepest tones, where through the very powerful working of the noise the conduction of tone in the middle ear can be abrogated, the lowering of hearing in noise is produced somewhere beyond the conducting apparatus, in the inner ear or even more central parts. The noises mostly met with are of a dull character, and are, therefore, like the very deep pure tones, the most influential in lowering the hearing in the whole range. Bárány's

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noise-machine was found to "disturb" deaf people with fixed conducting apparatus much less than the normal or the nerve-deaf. The region of the scale between C<sub>2</sub> and C<sub>5</sub> was the part most equally and considerably affected, and is the region of greatest importance for the perception of speech. A series of curves are given showing the difference between tests in quiet and in noise. The bone-conduction was not found to be really "increased" in obstructive cases if tested in the quiet, though it was apparently (very doubtfully) present in two normal persons artificially deafened with cotton-wool or wax. Bone-conduction was diminished in equal proportion with air-conduction. The author emphasises the importance of testing the capacity of the patient for understanding speech in the midst of noise in regard to fitness for work.

JAMES DUNDAS-GRANT.

*Arterio-sclerosis of the Internal Auditory Artery: Anatomical Pathological Researches.* HANS WANGEMANN (Dresden-Friedrichstadt). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxx., Part 1, p. 135.)

Fifty unselected adult cadavers were examined in order to make out whether and to what extent the internal auditory artery had a tendency to arterio-sclerosis. The examination showed that the artery was not a site of marked predilection for arterio-sclerosis, even when well-marked general arterio-sclerosis was present. With moderate sclerosis of the other arteries of the base it was found unchanged.

JAMES DUNDAS-GRANT.

*Vasomotor Changes in Two Cases of Cerebellar Abscess.* Prof. SALVATOR TRAINA. (*Bollettino delle Malattie dell' Orecchio, della Gola e del Naso*, Sept. 1931.)

The author describes two cases of cerebellar abscess with unusual vasomotor changes.

The first patient, a woman of 53, complained of aural symptoms and showed signs of otitis, which she had had for ten years. There were no signs of lesion in the labyrinth or cerebellum and the fundus oculi appeared normal. A radical mastoid operation was performed and again there were no signs of extension. Ten days after the operation she complained of pain in the neck and head. After three weeks there appeared on the head, neck, thorax and shoulders an urticarial type of rash. A few days later the pulse became much slower and nystagmus appeared. Cerebellar abscess was diagnosed but permission to operate was not given. A post-mortem examination revealed an abscess in the cerebellum.

## Pharynx and Tonsil

The second case was that of a girl of 13 who had had otitis for ten years. She had facial paralysis and tenderness over the upper part of the mastoid. There was horizontal nystagmus.

A mastoid operation was performed. The facial paralysis began to improve, but five days after the operation the patient began to experience severe headache, with an irregular pulse, and to show the vasomotor changes on the head, neck, shoulder and chest similar to those in the first case. A diagnosis of cerebellar abscess was confirmed by operation and drainage effected, but death occurred within twenty-four hours.

These vasomotor disturbances simulating urticaria may be due either to lesions of the vestibule or of the medulla oblongata. In the first case there were no labyrinthine symptoms and the author thinks that the localised vasomotor changes are due to irritation of the bulbar centres, as they do not occur in the early stages when the labyrinth is affected, but in the later stages when the cerebellar abscess is growing rapidly and causing pressure on the medulla.

F. C. ORMEROD.

### PHARYNX AND TONSIL.

*Radiation Therapy in Cancer of the Mouth (with especial reference to the use of pure Gamma Rays).* G. E. PRAHLER and J. H. VASTINE (Philadelphia). (*Journ. Amer. Med. Assoc.*, Vol. xcvi., No. 9, 28th February 1931.)

The authors believe that most cancers of the mouth can be prevented by eliminating all forms of irritation such as those ensuing from tobacco, jagged teeth, infected gums or syphilis. Early and accurate diagnosis together with early treatment are of prime importance. The use of pure gamma irradiation gives better results than electrocoagulation, insertion of radium needles, or combinations of these with surgery. The technique used is based on Regaud's principles. His idea is that a moderate amount of irradiation continued over a considerable time is better than a large amount of irradiation given for a short time. As the irradiation becomes more penetrating the diffuse necrosing effects diminish and practically disappear. Only the selective active action remains on the most radio-sensitive cells, which are the mother cancer cells in process of division.

Radium rays are filtered through the equivalent of 3 to 4 mm. of lead covered with rubber and are used for three to four weeks. The lesion is attacked from at least two sides and at a distance of from 3 to 6 mm. For surface application the radium is kept in position by packs. A beeswax and hard wood powder compound is used for this

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purpose. From 100 to 300 mgrm. of radium are used in these packs and the unit is kept in position by adhesive plaster. 20,000 to 50,000 mgrm. hours are commonly used in surface application. Ready-made equipment will not suffice, as each case is an individual problem. When the lesion is of long duration, or when there have been previous treatments with induration and scar tissue, radium needles must be inserted. Preference is given to iridioplatinum needles of a filter value equivalent to 1 mm. of lead. Sometimes troublesome sloughing results. Surface packs are applied within a week after needling.

111 patients have been treated with packs. Of these, 39 are apparently well from one to five years after. Nineteen are still under treatment and are expected to recover. Treatment was interrupted in four cases. Five cannot be traced and 44 are dead. It is claimed that 50 per cent. or more of the patients with cancer of the mouth should recover by this method if treated early and thoroughly. It is claimed that the treatment is practically painless, requires no anæsthetic, produces no mutilation, can be used outside hospital, produces little or no local or constitutional symptoms, and that function is preserved. On the other hand it is exceedingly expensive and requires constant supervision by the radiologist, who must exercise great precautions against undue exposure to himself.

The article occupies nine columns, is illustrated, and has a bibliography.

ANGUS A. CAMPBELL.

*Hæmorrhage in Total Enucleation of the Tonsil.* Dr. LAPOUGE (Nice). (*Les Annales d'Oto-Laryngologie*, September 1931.)

Stress is laid by the author on the fact that his remarks apply only to hæmorrhage after complete removal, as opposed to partial removal, of the tonsils. He appears to think that it is more likely to occur in the former than in the latter. The normal and abnormal vascularisation of the tonsillar area is briefly described. The most dangerous anomaly is an embryonic persistence of the internal carotid artery, or the pushing in of the artery by an enlarged lymphatic gland. In this respect, he discusses the safer method of dissection by traction on the tonsil as opposed to the "morcellement" operation with Ruault's forceps. He discusses hæmorrhage according to whether it occurs (a) during the operation, (b) shortly after the operation, or (c) several days after the operation. Those that occur two to six hours after the operation are the most dangerous. It is the uncomplaining attitude of the patient which is likely to deceive the surgeon. Half measures in these cases are worse than useless. The tonsil cavity must be inspected under perfect illumination and the bleeding vessel located.

## Larynx

In the majority of cases, if the vessel is compressed with hæmostatic forceps for a quarter of an hour the bleeding will cease. If it does not the vessel must be ligatured. Some methods for effecting this are described.

M. VLASTO.

### LARYNX.

*Does permanent damage follow War-gas Poisoning?* Dr. PLEWKA (Leipzig). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxvi., Part 5, p. 559.)

Out of the numerous poison-gases employed in the Great War, there are two chief groups, the carbonyl chloride or phosgene and the di-chlor-ethyl-sulphide, yperite or mustard-gas. The phosgene group act chiefly on the lungs and only in a milder way on the mouth, throat, eyes and nose. The mustard-gas group affect mainly the outer surfaces and the eyes, mouth, pharynx and larynx, and only exceptionally the deeper airways and the lungs. The author is very sceptical as to "gassing" producing permanent damage in the throat, and when such damage is present it is probably due to other causes. He quotes the striking observation that out of a number of consumptive soldiers those who had been gassed showed a smaller incidence of laryngeal complication than those who had not. For the acceptance of a claim that disease in the throat in any given case is due to "poison-gas" he states:—(1) Proof that exposure to poison-gas had occurred; (2) that in continuity with the exposure there were acute subjective symptoms and objective changes in the throat-organs; (3) that there should be symptoms linking up the acute and the chronic stages; (4) that other causes can be excluded.

JAMES DUNDAS-GRANT.

#### *Direct Laryngoscopy and Aspiration in Laryngeal Diphtheria.*

W. T. BENSON. (*Lancet*, Vol. ii., p. 956, 1931.)

The author gives an account of his work at the Edinburgh City Hospital, and offers the following conclusions:—

1. When symptoms of croup are suspected to be due to diphtheritic infection, the laryngoscope, supplemented by bacteriological examination of the larynx, affords the most accurate method of diagnosis.
2. In severe diphtheritic infection, inspection of the larynx will indicate the best method of relieving the respiratory distress.
3. Aspiration is indicated when dyspnoea is due to extensive membrane formation. When gross subglottic oedema is the cause of the respiratory difficulty, then operative measures are necessary.

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4. Fewer cases of laryngeal diphtheria require operation if aspiration is judiciously employed.
5. Direct laryngoscopy permits of the introduction of an intubation tube by visual guidance, thus diminishing the risk of trauma associated with the indirect method of intubation.
6. Whilst, as yet, satisfactory statistical evidence is lacking, one only needs to witness the dramatic relief following suction in certain cases of severe laryngeal diphtheria to form the opinion that this method of treatment is worthy of serious consideration.

MACLEOD YEARSLEY.

### NOSE AND ACCESSORY SINUSES.

#### *Disturbances of the Sense of Smell and their Clinical Significance.*

H. LAEMMLE. (*Arch. Ohr., u.s.w., Heilk.*, October 1931, Band cxxx., pp. 22-42.)

Disturbances of the olfactory sense are divided into four groups:—

1. *Hyposmia* or lessening of the sense of smell is found in connection with local changes in the nose, such as turbinal hypertrophy, septal deviation, mucous polypi, and this is called “peripheral” hyposmia. There is also a “central” type of hyposmia due to lesions of the tract of the 1st cranial nerve from the olfactory epithelium to the cortex; *e.g.*, concussion, fractured base, cerebral tumours. Curiously enough *ozæna* is included among the “centrally”-caused type of hyposmia or anosmia, as there is a primary degeneration of the olfactory epithelium which is part of the central tract.

2. *Anosmia* is a more pronounced degree of (1) with the same ætiology.

3. *Parosmia* is a qualitative alteration in the sense of smell. Certain olfactory sensations which to normal people seem agreeable are felt to be disagreeable, and *vice versa*, *e.g.* after concussion, in certain cases of cerebral tumours, in mental disease and hysteria.

4. *Hyperosmia* is the opposite of hyposmia, *i.e.*, an excessively active sense of smell. It has little clinical significance. *Cacosmia* which is found with carious teeth, sinus suppuration, etc., is included here.

Olfactory impressions are closely linked with sensations connected with the 5th nerve (*e.g.* warm, cold, or pricking sensations due to the inhaled substance) or with the 9th cranial nerve, that is taste sensations. This is one of the difficulties in the investigation of the olfactory sense. There are also great difficulties in the way of classifying these sensations as there are some 30,000 substances giving distinct and different olfactory impressions. Zwaardemaker has attempted a

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complete classification and recognises nine groups. Zwaardemaker's olfactometer is described, but his method is too complicated for clinical use.

A simple test is described in which ten to twelve substances are used; these are kept in small bottles with glass stoppers (Börnstein's method). The testing substances were chosen on a definite plan, beginning with a substance with very little penetrating power like bees-wax to sulphuretted hydrogen at the other end of the scale. Menthol (cold sensation) and ammonia (pricking) are examples of vapours with a strong trigeminal component, other substances like chloroform and pyridin have a taste component (9th nerve).

Börnstein's method was used by the author in about 100 cases, the results being shown in tables for seven of them. The main conclusions are as follows:—

There is no method which enables one to distinguish absolutely between peripheral and central disturbances of the olfactory sense.

In organic disturbances of smell, especially if local causes be discoverable (*e.g.* sinus suppuration, polypi), only the pure olfactory sensations are diminished or lost, but not the sensory impressions in the nose connected with the 5th and 9th cranial nerves.

If one finds normal conditions in the nose and yet there is loss of smell as well as loss of the tactile and taste components, one can diagnose hysteria or simulation.

J. A. KEEN.

### MISCELLANEOUS.

*Principles of Prognosis in Cancer.* WILLIAM CARPENTER MACCARTY, Rochester, Minn. (*Journ. Amer. Med. Assoc.*, 3rd January 1931, Vol. xcvi., No. 1.)

From the author's clinical and pathological experience there are many factors governing prognosis in cancer. It is stated that the length of life is inversely in proportion to the amount of glandular involvement and distant metastasis. To this principle there is the corollary that the outlook depends on the location of both primary and secondary growth. The greater the fixation of a cancer to surrounding tissues, the greater the difficulty of surgical removal, and the greater the immediate operative risk, the less chance there is of complete recovery. Malignant or benign tumours located so as to produce early symptoms are more favourable. The lower the cardiac and renal efficiency and the greater the anæmia, the greater the therapeutic risk and the shorter the length of life. The larger the primary growth, the greater is the possibility of glandular involvement and hence a worse prognosis. Cancer in young people is usually

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more rapidly fatal than in older ones. Cancers which grow toward the surface of an organ, involving surrounding structures, have a worse prognosis than those growing toward the lumen. Loss of weight as a single prognostic factor is of little significance but, associated with other factors, adds gravity to any prognosis. Individuals who are underweight are usually better risks than those who are overweight. The duration of the disease is of value when considered with other factors, as histories are very unreliable. Microscopic grading of cancer is not considered to have much accurate clinical value and at present should be considered to be in the experimental stage.

The article occupies five columns and has six tables.

ANGUS A. CAMPBELL.

*The Surgical Management of Intrathoracic Goitre.* FRANK H. LAHEY. (*Surg., Gyn. and Obst.*, 1931, Vol. liii., No. 3.)

Intrathoracic goitres are divided into two groups: (1) completely intrathoracic, in which the greatest diameter of the goitre is below the top of the sternum; and (2) incompletely intrathoracic.

The pathology of these cases is discussed, as is the means by which they eventually became intrathoracic, a path behind the sternum being made for the enlarging tumour in the lower lobe of the thyroid by the constant movement of the latter during the act of swallowing.

The symptoms are mainly referable to pressure effects on the trachea, which becomes distorted and narrowed, breathing being interfered with. In some cases the obstruction is noticed only when the patient is on one particular side, the trachea being "kinked" over the goitre, which thus further reduces its lumen. Occasionally, attacks of suffocation occur during sleep: in these cases a plug of mucus accumulates below the point of narrowing and when the patient lies down this plug becomes lodged in the narrow portion of the trachea, an obstruction which is overcome as a result of the violent respiratory struggles dislodging the plug.

Marked lateral deviation and rotation of the trachea usually results and helps in making the diagnosis. The final diagnosis, however, depends on the demonstration of an X-ray shadow within the thorax in close relation to the trachea with the latter curving round and being closely applied to the goitre against which it rests. Dilatation of the superficial thoracic veins of the upper chest wall is also a common feature.

In the removal of this type of goitre, J. de B. Pemberton ligates and divides the superior thyroid artery and vein as a first step. The blood supply descends from above downwards, and this step mobilises

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the upper portion of the mass and enables it to be turned forward, thus exposing the point at which it is in contact with the great vessels.

The whole goitre should be removed intact. To do this after the vessels have been ligated a finger is passed round the lower pole from behind, the latter being gently separated from the surrounding structures.

Pressure by means of the finger from below, aided by traction from above, will usually deliver the goitre from the mediastinum. Prior to this, should there be any marked respiratory obstruction, a stiff-walled intratracheal catheter should be passed.

Ligation of the inferior thyroid vessels is rarely necessary, the posterior shell of the thyroid tissue with the elongated vessels being left ("a method of removing discrete adenomata of the thyroid," *Ann. Surg.*, July 1927).

The author suggests that every deeply situated goitre should be removed before it can become intrathoracic. S. BERNSTEIN.

## REVIEW OF BOOK

*Index of Treatment by Various Writers.* Edited by Dr. ROBERT HUTCHISON. (Published by John Wright & Sons, Bristol. Price 42s.)

Present-day medicine and surgery are so complex that it is a pleasure to find a book so excellently arranged. Not only does it contain all the essentials of modern treatment, but at the same time it very greatly simplifies their reference. The treatment of symptoms and diseases are arranged in alphabetical order, and all the branches of medicine and surgery have been well covered.

The introduction alone contains much of value to the young practitioner, while the book, as a whole, should be of inestimable value to all who wish to have a wide knowledge of the practice of medicine and surgery. Dr. Robert Hutchison has succeeded in producing a reference book of exceptional utility.

Our own speciality has been well dealt with, although possibly some of the space devoted to endoscopy could have been more advantageously used by a more lucid description of the indications for mastoid antrotomy.

It should be noted, also, that drainage for the maxillary antrum via a tooth socket is still advocated in certain cases, which is, perhaps, contrary to the modern view. ALFRED WALFORD.