

Abstracts

for about five years. He had had some thirty-five cases, and as far as he could remember he had seen two post-cricoid carcinomas. One was a case of pharyngeal carcinoma, and that also developed a post-cricoid carcinoma about seven years after he had dealt with the pharyngeal condition. Another patient had nasopharyngeal carcinoma and also a web. Mr. Simpson's experience pointed to rather a distressing future. He wondered whether Mr. Simpson had had other cases of post-cricoid webs not included in this series. Physicians were tending to send up many cases of anæmia, and now he found he was getting more examples of webs in patients who complained of dysphagia. Clinically these people did not at the outset complain of dysphagia ; it was necessary to ask them about it, and in reply to a question they would always say, " Oh, I have always had a small swallow," and later the web was found. Quite often the œsophagoscope was passed into the stomach and the mucous membrane there was somewhat atrophic, as it was in the œsophagus and in the pharynx and larynx.

R. R. SIMPSON, in reply to Mr. Flett's point about the post-cricoid web without carcinoma, said that he had several of these cases under observation at the moment, and they had not been included in his paper because they did not seem to come within the limits of the subject. He agreed with Mr. Flett that the post-cricoid web was encountered ; it was not an artefact at all.

ABSTRACTS

EAR

Arcus Lipoides of the Ear-drum. J. BERBERICH. (*Lancet*, 1939, ii, 833.)

The author discusses the history of the investigation of the condition, found in elderly people, known as " arcus senilis corneae ", which occurs also at times in younger persons, and its relation to disturbances in the metabolism of fat and lipoids. A similar relation between metabolism and diseases of the ear, nose and throat is less well known, and the author has studied it for fourteen years. From his results, he concludes that analogous to the arcus lipoides corneae is an arcus lipoides myringis, which consists of a deposit of cholesterol, neutral fat, and fatty acids, identical with that occurring in the eye. This arcus lipoides is due to hypercholesterolæmia, of which it is an infallible sign. The arcus is found in those ear diseases which are accompanied by hypercholesterolæmia—e.g. recurrent plugs of cerumen, most cases of deafness in old age, hyperpiesia, and often diabetes. In experimental animals these changes can be reproduced exactly by feeding them on cholesterol.

MACLEOD YEARSLEY.

Ear

Defective Hearing and Nutrition in Children.

P. M. TOOKEY KERRIDGE. (*Lancet*, 1939, ii, 781.)

The author, with the assistance of three students of University College, has carried out an important and valuable investigation into the incidence of deafness in children in reference to their nutrition. Middle-ear deafness is about four times as common, on the average, under poor social conditions as it is under good ones. In the poorest places, whether urban or institutional, it may be nearly ten times as common as in a good environment, nearly a quarter of the child population being affected. Climate, housing, and the mixing of children seem to have no effect on the incidence of the deafness. The children with the highest incidence of defective hearing had diets deficient in many factors, but an increase in the food taken by two groups of these children for a year did not reduce the incidence of defective hearing. The children investigated were drawn from schools in Kent, London, Oxford, East Anglia, Manchester, and Scotland. The figures show that probably the most important work on the prevention of deafness will be done by those who are striving to improve the social conditions and, in particular, the nutrition of the nation. Diet has been discussed from the relative effects of ignorance and poverty on malnutrition, and it is agreed by most observers that where there is sufficient money nutrition is usually adequate, and that it takes knowledge and skill to provide adequate nourishment for a family when money is scarce. Shortage of money in institutions makes for unsatisfactory conditions of feeding, however much the staff are aware as to how children should be cared for. Such conditions reflect seriously on those who administer these institutions, and in whose callous hands rests the prevention of deafness.

MACLEOD YEARSLEY.

Tuberculous Oto-mastoiditis with Periphlebitis of the Sigmoid Sinus.

CESARE BACCARINI. (*L'Otolaryngologia Italiana*, 1938, viii, 420.)

The author records the case of a child of seven years with a purulent otitis and tenderness over the mastoid process. A cortical mastoid operation was performed and the cells in the neighbourhood of the sigmoid sinus were filled with greyish granulation tissue. The wall of the sinus was exposed and was found to be covered with the same material. Some of the granulations were removed from the sinus wall and this was found to be otherwise healthy. There was no evidence of sinus thrombosis. Histological examination of the granulation from the cells and from the wall of the sinus showed its tuberculous nature. The child recovered without any further complications, but later the tonsils and adenoids were found to be infected with tuberculosis.

Abstracts

The author draws the two morals from this and similar cases—that it is extremely difficult, if not impossible, to diagnose clinically the tuberculous nature of an infection of the middle ear or mastoid ; and also that the oro-pharyngeal lymphoid tissue is an extremely important factor as a primary localization of tubercular infection in infancy.

F. C. ORMEROD.

Lesions of the Internal Ear caused by Decompression. E. CHIAPPE.
(*L'Oto-rino-laringologia Italiana*, 1939, ix, 149.)

Among the lesions caused by the varying pressures in caisson work, there are certain changes in the internal ear. The lesions are due either to too rapid compression or more frequently to too rapid decompression. Various diseases and departures from normality in the workers predispose to such lesions. Among these are arteriosclerosis, alcoholism and chronic renal disease with cardiovascular changes. Locally, acute or chronic lesions of the middle or internal ears or of the Eustachian tubes render a subject liable to the lesions of caisson disease.

The author has performed a number of experiments on small animals, chiefly guineapigs, subjecting them to compression and to decompression at different rates and with different intervals. He examined the internal ears histologically and found that the gravity of the lesion depended on (1) the pressure (number of atmospheres above normal), (2) the duration of the compression, and (3) the rate of decompression. The last had more effect than the other two.

When the rate of decompression is rapid and the effects severe, there is a true traumatic labyrinthitis with destructive tendencies. There are vascular lesions with both endo- and peri-vestibular hæmorrhages. The hæmorrhage is of an infiltrating character and may destroy the ganglia of the cochlear and vestibular nerves.

If the action is less intense, there will be degenerative lesions with inflammatory changes of varying degree.

The minimum effect of decompression consists merely of vasomotor congestion. The three degrees of damage to the internal ear are therefore as follows :—

1. The destructive traumatic type.
2. Mixed type, traumatic and inflammatory degenerative.
3. Vasomotor type.

In no case was there any lesion of the petrous bone or of the labyrinthine capsule.

F. C. ORMEROD.

A Clinical Study of Caisson Disease. A. CRESPI LEGHIZZI. (*Archivio Italiano di Otolgia*, 1939, li, 408.)

In a caisson or diving bell the pressure in the compartment must be equal to or a little greater than that of the surrounding

Nose

water. At a depth of ten metres the pressure must be increased by that of one atmosphere.

The sojourn of the worker in the caisson is divided into three stages: compression, work in the caisson, and decompression. If during compression the pressure is increased too rapidly there may be hæmorrhage into the labyrinth, due to the laceration of small capillaries. This gives rise to severe frontal headaches, violent pain in the ears with tinnitus and deafness. Such disturbances are rare, but similar symptoms, in lesser degree, may be occasioned by vascular disturbances.

During the period in the caisson while the pressure is stable there is a slowing of respiration and of the pulse rate and the voice takes on a nasal timbre.

Decompression, if allowed to proceed too rapidly, produces the same results as compression, but to a greater degree, the hæmorrhages tending to occur more frequently and to be more extensive.

There may be in slight cases merely a congestion of the tympanic membrane, but there may be also all the stages of inflammation of the middle ear, up to a purulent otitis media with mastoid and even intracranial complications.

The labyrinthine lesion, fortunately rare, has a variable prognosis. In many cases there is a gradual improvement which is often not quite complete. In some cases there is vertigo, which is due to labyrinthine hæmorrhages. The deafness and tinnitus may disappear completely or partially or there may be left an absolute deafness with or without tinnitus and it is very difficult to give any prognosis.

The degree of incapacity varies according to these different degrees of recovery and gives rise to difficult medico-legal problems.

F. C. ORMEROD.

NOSE

Regional Anæsthesia in the Nasal Cavity. DOTT. GATTI-MANACINI.
(*Archivio Italiano di Otologia*, 1939, li, 495.)

The nerve supply of the interior of the nose consists of branches of the trigeminal nerve, of the sympathetic and of the cranial autonomic. These are intimately mixed and cannot be separated.

The nasal cavity can be divided into three zones:

1. The antero-superior. This is supplied by the nasal nerve which is a branch from the anterior ethmoidal branch of the ophthalmic division of the trigeminal nerve.

2. The inferior. This is supplied by branches from the sphenopalatine ganglion and some branches from the infraorbital division of the trigeminal.

3. The posterior. This is also supplied by branches of the sphenopalatine ganglion.

Abstracts

The septum is supplied above and anteriorly by the branches from the anterior ethmoidal nerve and below and posteriorly by the naso-palatine nerve.

The floor of the nose, the inferior turbinal and the inferior meatus are supplied anteriorly by the naso-palatine and posteriorly by the anterior palatine nerve.

The region of the *agger nasi* is supplied by the anterior ethmoidal branches.

The middle meatus and the maxillary antrum are supplied by two branches of the sphenopalatine ganglion—the posterior nasal and sphenopalatine nerves.

Blocking of the anterior ethmoidal nerve and of the sphenopalatine ganglion would therefore produce anæsthesia of the entire nasal cavity.

The sphenopalatine ganglion can be reached by the zygomatic route, entering the needle just behind the coronoid process of the mandible, by the palatine route through the posterior palatine canal and by Sluder's route through the nasal cavity, behind the posterior end of the middle turbinal. The author prefers the palatine route to the others.

The trunk of the nasal branch of the anterior ethmoidal nerve can be reached by passing a needle horizontally backwards from the supero-medial angle of the orbit for a distance of 4-5 centimetres and injecting under the periosteum. The branches may be infiltrated if the needle is only passed backwards for two centimetres. The author prefers the latter method.

The sphenopalatine ganglion anæsthesia is useful for operations on the maxillary antrum, the turbinals, polypi, posterior ethmoidal cells and the posterior part of the septum.

The anterior ethmoidal anæsthesia is useful for operations on the frontal sinus and the anterior ethmoidal cells, and also on the anterior part of the septum.

F. C. ORMEROD.

MOUTH

Osteoma of the Hard Palate. A. MAGNONI. (*Bollettino delle Malattie dell' Orecchio, della Gola e del Naso*, 1939, lvii, 201.)

The author records an example of this bony tumour in a woman of 52 who attended his clinic on account of an unassociated lesion—an auricular furuncle. The tumour was situated in the mid line in the middle third of the palate and measured 3 centimetres antero-posteriorly and 1½ centimetres from side to side. A cruciform groove divided its surface into four equal bosses. It did not in any way present into the nasal cavities and it did not give rise to any symptoms. A lateral radiogram showed a dense bony mass continuous above with the structure of the hard palate.

Larynx

The author states that tumours of the hard palate are very rare. He quotes Schmidt as finding that 0·2 per cent. of all tumours occurred on the palate and Sekoulitch in a smaller series as reporting 0·4 per cent. Such tumours as have been described include almost every type of neoplasm, benign and malignant.

The author was only able to find record of four bony tumours of the hard palate.

One was observed by Bond in a man of 28. It had been noticed for only nine months and was described as an exostosis.

A second was reported by Kelemen in a woman of 58 who had only noticed the swelling for four weeks. It occupied the middle third of the palate. It was removed and examined histologically, showing a layer of compact bone with underlying spongy bone. It was described as an exostosis.

The third case was a congenital one described by Van den Wildenberg. It was seen in a woman of 40 and was the size of a hen's egg. It arose from the left side at the level of the transverse suture and extended so as to obstruct the left choana completely and the right choana partially. There was dysphagia and also some dyspnoea. At birth the tumour was the size of a cherry and it had grown persistently since the age of 6. The tumour was removed and diagnosed histologically as an osteoma.

A fourth was diagnosed as an osteoma by Eustathianos.

The author notes that two of these cases were described as exostoses and two as osteomata.

He quotes various authors, who have written on the subject of bony tumours and remarks on the confusion existing in the nomenclature. The words exostosis, enostosis, osteoma and hyperostosis are used for structures with identical or practically identical histological characteristics. He suggests that all these tumours be described as osteomata and the word hyperostosis be reserved for diffuse thickenings of a portion or the whole of the skull.

F. C. ORMEROD.

In minor degree bony tumours of the hard palate are by no means rare. [EDITOR.]

LARYNX

The Distribution of the Laryngeal Nerves to the Extra-laryngeal Regions. ENRICO RUBALTELLI. (*Archivio Italiano per le Malattie della Trachea, Bronchi ed Esofago*, 1939, vii, 141.)

An investigation has been carried out in embryonic and foetal material with silver stains on the distribution of branches of the laryngeal nerves to the structures in the neighbourhood of the larynx—the trachea, the oesophagus and the tracheo-oesophageal space.

Abstracts

The author has reached the following conclusions :—

- i. That the cerebrospinal innervation of the upper orifice of the œsophagus consists of, in addition to the pharyngeal plexus, posterior branches of the recurrent nerve and branches of the external division of the superior laryngeal nerve.
- ii. That the cerebrospinal innervation of the upper tracheal rings is derived from the collateral branches of the recurrent nerve and to the internal division of the superior laryngeal nerve.
- iii. That the cerebrospinal innervation of the upper and middle thirds of the œsophagus, the trachea and the tracheo-œsophageal space is supplied by the collateral branches of the recurrent nerve.
- iv. That the sympathetic innervation of the upper and middle thirds of the œsophagus, of the trachea and of the tracheo-œsophageal space is carried by the pharyngeal plexus, the superior laryngeal and by the posterior terminal branches of the recurrent nerves. In the distal portions of these organs the supply comes from the autonomic component of the recurrent nerve, which is joined by the two well-known anastomotic branches from the sympathetic chain.

From these results the author has drawn certain physio-pathological conclusions :—

(a) The œsophagus. From the anatomical facts reported, the recurrent nerve must be regarded as the motor nerve of the œsophagus. This may help to clarify some of the obscure portions of the knowledge of deglutition and vomiting.

The existence of a considerable autonomic component indicates that the œsophagus is not a passive organ but that it possesses neuro-vegetative functions of its own.

The innervation of the upper sphincter of the œsophagus is seen to be derived from the glossopharyngeal and from both the superior and recurrent laryngeal nerves.

(b) The trachea. The rich motor innervation of the trachea, from the recurrent nerves, shows that it is not a passive organ, but possessed of powers of movement of its own, including those of lengthening and shortening, of contracting and dilating in relation to respiratory requirements, to coughing and to voice production. The autonomic component again explains some of the glandular and vasomotor phenomena in the trachea.

(c) The tracheo-œsophageal space—i.e. the space between the upper parts of the trachea and œsophagus. This is not merely a potential space or one occupied by areolar tissue only, but it contains muscle fibres, some of which join the tracheal and some the œsophageal musculature. It also contains a rich motor and autonomic nervous network, derived from the recurrent nerve.

Larynx

This may provide an explanation for some of the pharyngo-laryngo-oesophageal syndromes which are at present obscure.

F. C. ORMEROD.

On the Treatment of the Narrow Glottis in Recurrent Palsy.
W. KRAINZ (Innsbruck). (*Monatsschrift für Ohrenheilkunde*, 1939, lxxiii, 488.)

Three cases of bilateral recurrent palsy in which the cords were fixed in the mid-line were treated by section of the transversus muscle. With the larynx exposed by suspension laryngoscopy, a submucous transverse division of the muscle was carried out. The operation resulted in the immediate establishment of a glottic chink sufficient for respiration, permitting the disuse of the tracheotomy tube. Examination of two of the cases six months later showed the cords in the intermediate position, a glottic chink of 6 mm., and good closure on phonation. In the third case a Wittmaack-Amersbach operation had been carried out to alter the position of the cords. This, however, had not allowed decannulation. After section of the transversus muscle a triangular opening of the cartilaginous glottis was obtained.

These observations seem to support the view that in bilateral median fixation of the cords due to recurrent palsy, the chief factor is contraction of the transversus muscle.

DEREK BROWN KELLY.

Treatment of Trigeminal Neuralgia by Silver Clips. E. ERTL (Vienna). (*Monatsschrift für Ohrenheilkunde*, 1939, lxxiii, 484.)

This method consists in applying small silver clips to the affected peripheral branch of the trigeminal nerve. This results in the degeneration of certain (perhaps specially sensitive) fibres with consequent relief of the neuralgia. If the degree of pressure is correct, the sensory supply is only slightly interfered with. Any regeneration of the nerve can only proceed as far as the clip, so that recurrence of the pain is uncommon.

Exposure of the first and second branches is simple. They are clipped on the orbital roof and at the infra-orbital foramen. The third branch is more difficult to deal with, being sought at the mandibular foramen before it enters the mandibular canal.

Fifty cases have been thus treated by the author with, on the whole, excellent results.

DEREK BROWN KELLY.

A Ventriculocele in an Infant. L. ABBATE. (*L'Oto-rino-laringologia Italiana*, 1939, lx, 371.)

The author recalls how ventriculoceles were first described by Plotter and by Muys in the seventeenth century and mentions many

Abstracts

others who have studied this protrusion of the ventricle from the confines of the larynx.

Testut studied the anatomical paths by which the sac might progress in different directions. It usually pierces the thyrohyoid membrane behind the posterior margin of the thyrohyoid muscle. It may then turn upwards and appear as a swelling in the vallecula, or downwards and outwards to present in the submaxillary triangle. It may burrow under the infrahyoid muscles and appear in the median line of the neck. In other cases it may burrow below the sterno-mastoid muscle and appear in the posterior triangle of the neck.

The ventriculocele may present in the sinus pyriformis or may balloon out the ventricular band. These two swellings, with that in the vallecula, may be described as internal ventriculoceles.

Ventriculoceles may be congenital when they are an expression of atavism—a survival of a normal pouch in certain monkeys. They may be acquired and fall into two groups—those which result from some congenital defect such as a dehiscence of the cartilage or persistence of the neck of the sac described in the congenital type, but which only appear later in life, and those which are due to some lesion—traumatic, inflammatory or neoplastic—which causes a perforation of the wall of the ventricle or sacculæ and allows air to pass out into the subaponeurotic spaces.

This condition is not really a ventriculocele but is an emphysema of the extralaryngeal tissues—a surgical emphysema.

The differential diagnosis between these two types—the ventriculocele proper and the emphysema from the ventriculocele—is comparatively simple. In the emphysematous type there are signs of inflammatory lesions or of neoplastic disease, or of injury.

It is impossible to reduce emphysema whereas a ventriculocele disappears on cessation of muscular effort—such as straining or crying. In emphysema there is on palpation a sensation of deep crepitus. This is absent in the ventriculocele, but a resonant note can be obtained on percussion.

The ventriculocele is regular in outline and is somewhat ovoid in shape. The emphysematous swelling has an irregular outline with no particular shape. If its outline is altered by palpation it does not revert to its former shape after removal of the pressure.

In the case described the swelling was in the left submaxillary region of a child, and appeared when the child cried but disappeared immediately this was stopped. The swelling was resonant on percussion and was well shown by radiography.

It did not appear to give rise to any symptoms and no treatment was attempted.

F. C. ORMEROD.

Miscellaneous

Endothelioma of the Larynx. M. CHERUBINO. (*Bollettino della Malattie dell'Orecchio, della Gola e del Naso*, 1939, lvii, 242.)

The author recalls that the first recorded case of endothelioma of the larynx was that of Jobson Horne and that the next two were recorded by Lambert Lack and Chichele Nourse. This tumour in the larynx is of very rare occurrence and the author was only able to collect twenty-two cases in the literature. He records a further example which has recently been under his care.

The case was that of a man of 30 years. There was a history of hoarseness for two months, with a dryness of the throat and a cough that never produced any secretion. On examination there was a complete immobility of the left half of the larynx and an infiltration and swelling of the posterior half of the left vocal cord. A biopsy was performed and the histological characteristics of the tumour included cells of many types, frequent blood vessels and groups of cells which suggested immature vascular tissue. The author considered that the tumour was of the nature of a hæmo-endothelioma.

The mass increased during observation until the whole of the left cord was involved and the lumen of the glottis was reduced to a linear slit. A tracheotomy was performed partly because of respiratory embarrassment and partly as the first stage of the removal. Two months later a laryngo-fissure was carried out and the tumour which reached from the ary-epiglottic fold to the lower margin of the thyroid cartilage, was removed. There was no difficulty in the removal and there was comparatively little bleeding. The recovery was rapid and uneventful and the patient was up and about in eight days. Two courses of therapeutic X-rays were given. The patient was left with a free respiratory channel and a good voice.

F. C. ORMEROD.

MISCELLANEOUS

Pathogenic Staphylococci, their Incidence in the Nose and Throat and on the Skin. E. H. GILLESPIE, E. A. DEVENISH, and S. T. COWAN. (*Lancet*, 1939, ii, 870.)

The authors in an exhaustive paper find that from a test of 159 students for potentially pathogenic *Staph. pyogenes*, in which serological typing was used to establish the relationship between various strains, the following conclusions may be drawn. (1) The nasal-carrier rate was 43·4 per cent. and the skin-carrier rate 19·5 per cent. (2) The skin-carrier state depended on the nasal-carrier state, which in turn was associated with a history of chronic nasal disease. (3) The infestation of the skin of the hands may be relatively deep-seated, for five of thirteen double carriers excreted *Staph. pyogenes* into rubber gloves after routine surgical disinfection of the hands.

MACLEOD YEARSLEY.

Abstracts

Agranulocytic Angina as a complication of Arsenobenzole Treatment.

GIANNA SAIBENE. (*Archivio Italiano di Otologia*, 1939, li, 458.)

Two cases are reported in which a fatal agranulocytic angina occurred during the administration of an arsenobenzole compound for acquired syphilis.

The author quotes a number of papers dealing with this condition and describes the typical picture as consisting of hæmorrhages, purpura, anæmia and agranulocytosis with the acute necrosing pharyngitis.

The first case was treated with mercury regularly after the primary infection, and one year later was given a course of arsenobenzole treatment. He had had nine injections totalling 3·3 grammes when he noticed petechial hæmorrhages on the face and in the mouth. On examination he was found to be very anæmic, with extreme pallor of the skin and the mucosa. Heart and lungs were normal but the liver and spleen were enlarged, the former being tender on palpation.

Examination of the blood showed 1,000,000 red cells with a hæmoglobin index of 62 per cent. and but 1,800 white cells per cubic millimetre of blood. Lymphocytes were increased to 44 per cent. with 45 per cent. neutrophils, 1 per cent. basophils and 10 per cent. monocytes. There were no nucleated red cells. In a few days the petechiae increased in number and were followed by a series of hæmorrhages from the mouth. A necrotic inflammation of the tonsils and fauces was observed with an acute congestion of the tongue and palate. There was also much swelling of the cervical lymph nodes. Renewed hæmorrhages from the mouth and a broncho-pneumonia caused death on the fourth day after admission to hospital. At the post-mortem there was found in addition to the buccal and pharyngeal changes, multiple hæmorrhagic infarcts in the lungs, inflammatory changes in the spleen, severe degenerative changes in the liver, kidneys and cardiac muscle. There was a glomerular nephritis and a generalized hæmorrhagic purpura.

The second case was a man of 26 who was given a course of bismuth and mercury. After three months the treatment was replaced by injections of arsenobenzole, and after 3·5 grammes had been given the patient complained of sore throat with dysphagia and a general feeling of malaise. There were many petechial hæmorrhages and the pharynx was acutely inflamed. This condition rapidly progressed, the tonsils and fauces becoming necrotic in a few days. On the fifth day there was a severe buccal hæmorrhage, after which the patient died in a state of collapse.

During life the blood was found to contain 1,140,000 red cells and a number of white cells which varied between 900 and 1,300 per cubic millimetre. Of the white cells, 76 per cent. were lymphocytes.

Miscellaneous

The liver and spleen were enlarged and degenerate, with many petechial hæmorrhages. The kidneys and lungs were hardly involved at all.

The author advises that during treatment with arsenobenzole compounds careful watch must be kept for small hæmorrhages or petechial spots as their appearance is a danger sign and the treatment must be stopped. Similarly it is advisable to perform periodic blood counts and a lowering of either red or white cells should act as a warning to stop the treatment.

F. C. ORMEROD.