ABSTRACTS

EAR

The Anatomical Basis of Otogenous Meningeal Infection. A. GASTON. (*Les Annales d'Oto-Laryngologie*, March, 1933.)

Based on a study of twenty-three cases of meningitis, including otogenous meningeal reaction, the author describes his conclusions under the following headings:

(1) *Statistical.*

In the total twenty-three cases, lesions of isolated osteitis were found seven times, a labyrinthitis five times, a thrombo-phlebitis six times, and intra- or extra-cerebral collections eight times. (In three cases two complications were associated.)

Of the thirteen cases of true meningitis only one recovered. Anatomically the twelve fatal cases showed lesions as follows: three of acute osteitis, one of chronic osteitis, one of isolated labyrinthitis, two of isolated thrombosis, and three of isolated cerebral collections. In one patient the thrombosis was associated with a labyrinthitis and in another there was an association of thrombosis and abscess of the brain.

(2) *Bacteriological.*

The examination of the cerebrospinal fluid showed micro-organisms in seven cases, and in these five times a streptococcus (in which the result was fatal in all), once the proteus (again a fatal ending) and once the staphylococcus (the patient surviving although the spread to the meninges took place through the labyrinth). This appears to be in support of the contention that the staphylococcus is the least noxious of the organisms.

Among the sixteen cases in which the reaction was purulent but aseptic, the results were fatal in seven.

(3) *Clinical.*

The knowledge of the multiple paths of infection has important surgical consequences. One should particularly be on guard against the latent complications of an acute or chronic otitis, the search for which, in the presence of a meningeal syndrome, must be systematic, i.e., an extensive mastoidectomy (preferably a radical), the search for and drainage of deep cellular groups, especially those adjacent to the meninges, and the laying bare of the lateral sinus and even of the meninges in order to search for a latent thrombosis or intra-dural or intra-cerebral collections.

L. GRAHAM BROWN.

Ear

Ear Disturbances in a Case of Bang's Infection. H. VIDEBECH. (*Acta Oto-Laryngologica*, xix., fasc. 1.)

Since Martin Kristensen's publications on Bang's disease the clinical picture of this malady has appeared under most varied forms.

Oto-laryngologists cannot remain disinterested since, among other observers, Caesar Hirsch has called attention to the disturbances in the pharynx, and C. Hvidt has described a case in a man, aged 36, with marked perceptive deafness for high tones associated with slight alterations in the cerebrospinal fluid. Bergmark had also published a case of abortus infection with meningo-encephalitis in which, together with other nervous symptoms, there was some deafness of suggested central origin (Bárány).

The case described in detail in this article relates to a woman, aged 20, admitted to the neurological department of the Kommune Hospital at Copenhagen suffering from meningo-encephalitis following undulant fever. It was not, however, until some months afterwards that the patient complained of deafness and was examined in the otological department. Deafness for high tones was found, and was thought to be due to 8th nerve neuritis.

In discussing the case the writer refers also to examples of deafness in the rather similar condition of Malta fever, and draws attention to the fact that the deafness may be a late sequela.

H. V. FORSTER.

Topography of the Labyrinthine Capsule. H. P. CHATELLIER (*Les Annales d'Oto-Laryngologie*, June and July, 1933.)

This subject is described under two main headings. The first deals with the general topography of the labyrinthine capsule in relation to the base of the skull and to the petrous bone, and includes its volumetric relations, its orientation in the horizontal and vertical planes, and its relations to the perilabyrinthine cells.

The second chapter gives its particular relations as a whole and those of its component parts to each of the four surfaces of the petrous pyramid.

This valuable contribution to otology, published in two consecutive issues of the above journal, should be studied in the whole of its sixty pages to be fully appreciated. It is illustrated by twenty-eight figures consisting of photographs of dissections, radiographic films of injected preparations, and diagrams.

L. GRAHAM BROWN.

Exploration of the Petrous Apex by the Path of the Carotid Canal. J. RAMADIER. (*Les Annales d'Oto-Laryngologie*, April, 1933.)

The author has shown by previous operations on the cadaver, and then on the living chimpanzee as well as human patients, that

it is relatively easy to expose the carotid artery through a large portion of its bony canal without danger to the meninges, to the artery itself or to surrounding structures, and that, even if the artery is accidentally wounded, the hæmorrhage can be readily controlled by packing so as to allow subsequently, if necessary, ligature *in situ* in the petrous itself or, if this is impracticable, in the neck. This depends upon the fact that the artery, in entering the petrous canal, changes its musculo-elastic coat into a purely muscular one, or that the artery no longer pulsates and, if wounded slightly, tends to close the lesion by clotting, as in the case of the lateral sinus. Hence the author especially advocates this path of approach to the petrous apex in cases of deep osteitis when the infection has spread by peritympanic cells from the anterior portion of the tympanum. Also it can be used in gun-shot wounds of the petrous region with retained projectile, and in cases of neoplasms of the ear invading the petrous bone.

The operation is described and clearly illustrated by drawings of anatomical preparations which show the following stages:

1. A radical mastoidectomy, enlarged if necessary, in order to expose the tubo-carotid region of the anterior portion of the tympanum.

2. Trephining of the carotid canal at the level of the postero-inferior angle of the tubal orifice.

3. Resection of the antero-supero-external wall of the carotid canal.

4. Trephining and curettage of the petrous apex above and behind the carotid artery thus laid bare.

L. GRAHAM BROWN.

Acute Otitis caused by the Friedländer Bacillus. G. EIGLER. (*Arch. Ohr-, usw., Heilk.*, 1933, cxxxvi., 318-31.)

A middle-ear infection by the *Friedländer bacillus* is said to be a rare condition. Only about fifty cases have been reported in the whole otological literature, sometimes in groups of small epidemics, especially outbreaks after bathing (see full references). The clinical course of this form of otitis is very severe, and Friedländer-otitis in its main features resembles the mucosus-otitis group, the latter form being caused by a *pneumococcus*.

The author describes two personal cases. In both instances the patients died from the complications, one from septico-pyæmia and multiple abscesses, the other from suppurative meningitis. Clinically these cases could not be distinguished from Friedländer-otitis or the severer types of mucosus otitis. However, there was an important difference, as the organism isolated from the metastatic abscesses in the kidneys, prostate, meninges, and from the nose in the first case

was the *ozæna bacillus* first described by Abel. This patient had suffered from ozæna for years.

The grouping and differentiation of these organisms are fully discussed. No cultural methods have yet been discovered which enable one to distinguish satisfactorily between the Friedländer bacillus, Abel's ozæna bacillus and Frisch's scleroma bacillus. They are all capsulated bacilli, resemble each other in their cultural reactions, and are possibly identical.

J. A. KEEN.

Does Spontaneous Nystagmus occur in Normal Subjects? W. M. Youngerman. (*Arch. Ohr-, usw., Heilk.*, Oct., 1933, Band cxxxvi., 314.)

In a series of 700 subjects with normal ear organs and normal findings in the central nervous system, the author found a spontaneous nystagmus in two cases. It seemed to be of some importance to give a definite answer to the question asked in the title of the paper.

These two patients with normal findings showed spontaneous nystagmus only when they were wearing certain special spectacles (Frenzel) which exclude visual fixation. In a third case, with spontaneous nystagmus, the neurologist was not satisfied that early disseminated sclerosis had been altogether excluded.

Dr. Youngerman expresses the opinion that spontaneous nystagmus may sometimes occur in persons who are apparently in normal health, an observation which should be noted. At the same time he is anxious to point out that his conclusion does not detract from the value of spontaneous nystagmus as a clinical sign. For instance, after a head injury spontaneous nystagmus is often the only objective sign of an intracranial lesion.

J. A. KEEN.

Orr's Treatment in Otology. DR. F. GOMEZ GUTIERREZ. (*Revista Española y Americano de Laringologia*, March, April, May, 1934, 24.)

The author, in his thesis for the degree of doctor, has made a study of the healing process in the bone wound after the radical operation. In large clinics in which many patients require dressing, the time of healing and the number of dressings required are important economically. Special skill is required for the dressing and many patients become intolerant of frequent dressings. There is also difficulty in providing beds for patients whose home is distant from the aural clinic, and such patients might continue their work if dressings were not required frequently. All the well-known methods of dressing were tried with this in view, without a satisfactory solution to the problem. In November, 1930, it was decided

to give a trial to Orr's treatment for osteomyelitis. This treatment had been much used for bone wounds in the hospital of Santander and it seemed to the author that the lesions which called for a radical mastoid operation were, from the general point of view, simply areas of osteomyelitis in the temporal bone, surrounded by special anatomical structures.

Orr was an American surgeon who, during the Great War, was faced with an enormous number of infected compound fractures complicated by osteomyelitis. The problem was whether the fracture required attention primarily or whether the infected wound was more important, and he decided to devote his attention in the first place to the fracture, leaving the infected wound to secondary consideration. Therefore this was packed with gauze soaked in vaseline and the fracture was immobilised with plaster, which could be removed if any complications arose. Far from this, with the exception of slight rises of temperature during the first few days after the dressing, the cases ran a normal course and he observed with surprise that when the plaster was removed the wounds were covered with granulations or sometimes even completely healed. The author has made a bacteriological study of his cases, and has also divided them into acute and chronic ; those with complications, and those with exposure of the dura mater and lateral sinus. The first patient chosen for a trial was one in whom neither the lateral sinus nor the meninges were exposed and in whom there was no sign of post-operative complication. The dressing of Orr was left untouched for a fortnight and no suspicious symptoms appeared. At the end of this time the dressing was removed and the cavity was found to be covered with foul pus. A dressing of ribbon gauze was used and on the following day the cavity was covered with a layer of granulations of perfect appearance and a large part was already epidermised. The author concludes that cases with complications should not be treated in this way, and that it should not be used until an exposed lateral sinus is covered with granulations.

Ribbon gauze 2 cm. wide is used ; it is kept folded in a wide mouthed bottle and vaseline is added. The whole is then sterilised in an autoclave. Several dressings can be done with one bottle, but only at one session, and re-sterilisation is necessary before further use. The cavity is to be rendered as clean as possible and freed from all blood clot before the dressing is applied. A plastic giving a wide meatus is desirable and the dressing should be done under good illumination through a speculum. The vaseline appears to allow drainage and the dressing is left for seven or eight days. The only precautions necessary are to take the temperature of the patient twice daily, and careful observation. The bandage and cotton wool may be changed, but the gauze is changed as seldom as possible. Some eczema of the skin, the appearance of granulations at the

lower end of the incision, or slight fever for the first few days, are not indications for removing the dressing. This is necessary only if the wound opens and suppurates. In such cases there was no further trouble after removal of the dressing and all the cases were free from complications. In some cases the dressing has been kept in place for a month or more, but an average time is two to three weeks ; for it is better to do the dressing twice than to keep a single dressing in position too long, but the period should not be less than six days, for it is at this time that the defensive factors on which the treatment depends are brought into play.

When the dressing is removed the skin is eczematous, there is foul pus, and the cavity bleeds. All this disappears very soon after dressing with plain gauze, and the cavity becomes covered with healthy granulations. In six recent cases in which skin grafts were applied, healing was complete in five to six weeks, during which time they were dressed six or seven times. Important factors in the success of the treatment are that drainage takes place through the vaseline, and that it produces an anaërobic medium.

The author discusses the views that have been put forward by Orr and by Albee on the mechanism by which the treatment acts, and then recounts his own observations. In his view, the importance of the anaërobic medium is that it produces an alkaline medium which has an unfavourable effect on pyogenic organisms. It is only on this account that the medium is unfavourable, since the majority of pyogenic organisms are facultative anaërobes. The anaërobes, however, undergo an alkaline putrefaction and thus produce an unfavourable effect on the organisms of suppuration. It has been demonstrated that the streptococcus languishes and even dies in a medium in which Ph. is above seven, that is, with alkaline tendency. It is now known that an acid medium favours the development of organisms of suppuration. But it acts prejudicially on the leucocytes and so gives rise to a vicious circle, since the acid medium favours the development of the pyogenic organisms and they in turn increase the acidity of the medium. Alkalinity breaks the vicious circle, both by the direct unfavourable effect on the organisms and by the good conditions in which the leucocytes are placed for the struggle. The author has arrived at this conclusion after a careful study of the pus from fifteen cases before and after the treatment. None of the cases of otorrhœa was free from organisms but in six the only organism was proteus. In two cases the staphylococcus was the sole organism ; in all the others the infection was mixed. Altogether he found proteus in seven cases, staphylococcus in six, streptococcus in three, pseudodiphtheria in three, acid-fast bacilli in two, pneumococcus in one. After operation but before Orr's treatment was applied, there was proteus in nine cases, staphylococcus in six, streptococcus in three, pseudodiphtheria

in five, acid-fast bacilli in two and pneumococcus in one. After Orr's treatment had been applied up to twenty days, in three cases organisms were absent in stained smears of the discharge, but in culture only one remained sterile and the other two grew proteus with difficulty. In the remaining twelve cases organisms were found, but they had become so scanty that several fields of the microscope had to be searched to find them. Streptococcus was absent both in smears and cultures. The putrefactive and anaërobic conditions apparently favoured proteus, but all other organisms had diminished. Thus there was proteus in eleven cases, staphylococcus in three, pseudodiphtheria in two, and the acid-fast bacilli in two. The author is doubtful if proteus has any pathogenic power in the ear, and investigation is required to determine if it is capable of producing otitis media.

He finds that the pus becomes alkaline from the production of ammonia and ammonium carbonate. The thesis is a long one and contains the results of much detailed observation.

L. COLLEDGE.

Hyperacusia. ERICK LESCHKE. (*Münch. Med. Wochenschrift*, Nr. 19, Jahr. 80.)

The author distinguishes between juvenile paroxysmal hyperacusia, which occurs in young healthy people and which has an hysterical or nervous organic ætiology, and a lasting hyperacusia which results from a constitutional hypersensibility of the auditory function. He quotes letters from medical colleagues who suffered from each type of hyperacusia and which describe their symptoms in detail.

J. B. HORGAN.

Empyema of the Petrous Apex; Further Observations and Case Reports. SAMUEL J. KOPETZKY and RALPH ALMOUR. (*Annals of O.R.L.*, 1933, xlii., 802.)

Infection of the petrous apex is of two types; the acute, characterised by retro-orbital pain and profuse aural discharge and, possibly, accompanied by paralysis of the sixth nerve, and the chronic, characterised by a persistence of aural discharge after a mastoidectomy performed on a cellular mastoid, and only diagnosable by X-ray or exploration of the bone. These chronic cases do not as a rule present the characteristic symptom of retro-orbital pain.

The X-rays are taken either in the Stenvers position, or in the usual position for the base of the skull. A word of warning is issued regarding the diagnosis from X-rays. A mere blurring of cells must not be regarded as diagnostic; only a definite destruction of cell wall is conclusive.

Treatment is operative and the route of approach advocated is as formerly described. A radical operation is performed and if any fistula leading into the petrous apex can be demonstrated, this is cautiously widened. Should no fistula be demonstrable an approach is made through the wall of the tympanic orifice of the Eustachian tube at an angle of 22 to 25 degrees—the angle opening posteriorly—to the axis of the external auditory canal.

A complete description of eight cases of this complication, with X-rays and operative findings, is appended.

E. J. GILROY GLASS.

N.B.—The original articles on this subject by the same authors are to be found in the *Annals of O.R.L.*, 1930-1, xxxix. and xl.

LARYNX AND TRACHEA

Tuberculous Disease of the Prelaryngeal Gland. DR. ARDOUIN. (*Les Annales d'Oto-Laryngologie*, September, 1933.)

The lymphatic system of the neck is particularly well developed. Forming part of this system but present only in 50 per cent. of cases, are one or two prelaryngeal glands into which flow the lymphatics from the sub-glottic region. This glandular system is placed below the sub-hyoid muscles, over the crico-thyroid membrane in the V-shaped area between the crico-thyroid muscles.

There are certain features in connection with tuberculous infection of the prelaryngeal gland which distinguish it from a similar infection of other lymphatic glands of the neck:

(1) It is practically confined to the male sex.

(2) The swelling is strictly in the middle line.

(3) Frequent and early fistula formation.

The condition is painless. There may or may not be hoarseness, according to the extent of the laryngeal lesion. The fact that the tumour moves with deglutition might cause the swelling to be confused with a thyroid cyst. The latter, however, is situated higher up and is smaller and pedunculated.

The treatment is puncture and aspiration.

M. VLASTO.

Weighted Retractors for Tracheotomy. CONRAD WESSELHOEFT. (*Jour. A.M.A.*, July 29th, 1933.)

The instrument described consists of a pair of weights hung from a silver wire loop. This loop can be easily bent to form any angle suitable for retracting. The loops are inserted in the incision and the weights resting on the sides of the neck hold the wound open with equal traction. In adults second weights may be hung on the

first ones, thus increasing the traction. The upper weights are 168 Gm., and the lower 152 Gm. It is claimed that the retractors do the usual work of the assistant and permit of more speed and accuracy, as they do not interfere with the operator's left hand.

The article is illustrated.

ANGUS A. CAMPBELL.

The Origin of Singers' Nodes as a result of failure to safeguard the Voice subsequent to Influenzal Infection. L. FORSCHNER. (*Wiener Klin. Wochenschrift*, Nr. 44, Jahr. 46.)

The professional singer is exposed to the possibility of serious vocal injury after even a mild attack of influenza.

A lengthy suspension of professional activity, with vocal control, is therefore urgently to be advised after the attack has subsided. Protective treatment must be initiated upon the appearance of vocal asthenia. It is very advantageous to institute, at the same time, some tonic treatment such as the insulin-arsenic cure. For this purpose the author gives five to eight insulin units daily, with an intra-muscular injection of arsenic every second day for a period of from three to five weeks.

The author stresses the injury which may accrue to the voice from slimming cures.

J. B. HORGAN.

TONSIL AND PHARYNX

The Treatment of Quinsy and Peritonsillar Abscess by Tonsillectomy as the Method of Choice. DR. JUAN MANUEL TATO. (*Revista Española y Americana de Laringologia*, May, 1933, xxiv., 211.)

The author has collected a total of 356 cases of peritonsillar abscess treated by tonsillectomy in recent years including twenty-nine of his own. In only one case was there a septic complication with signs of rheumatism and, in one case of the author's, a hæmorrhage which was easily arrested. In three of the twenty-nine cases the abscess was bilateral so that he removed thirty-two tonsils altogether in the treatment of the abscesses. The results have been excellent, providing a safe and quick cure of the abscess, and eliminating relapses and late recurrences with their possible complications. After the operation " en caliente " the temperature falls by crisis on the same or the following day, in contrast to the temperature of patients operated " en frio ". The general condition soon improves and the relief of pain is immediate. The pain of the wound is much less than after the operation " en frio ", perhaps because the tonsillar bed is already lined by granulations. It does

not become covered with masses of fibrin as ordinarily, but is slower in arriving at complete cicatrisation.

In the series the extremes of age were 4 and 70 years. The author employs local anæsthesia. He gives the clinical histories of his own cases and a full bibliography.

L. COLLEDGE.

NOSE AND ACCESSORY SINUSES

Acute Retrobulbar Neuritis of Rhinogenic Origin and Multiple Sclerosis. RUDOFF BERGMEISTER. (*Münch. Med. Wochenschrift*, Nr. 18, Jahr. 46.)

The record of a case of acute retrobulbar neuritis in a girl of 19 years is given.

When first seen on June 19th the vision was reduced to 6/36 in the affected (right) eye. The eye was slightly protracted, with limitation of movement. There was congestion of the retinal vessels and blurring of the optic disc. There was a central red-green defect of the visual field of 10° extending from the blind spot to the fixation point. The X-rays revealed a central irregular loss of translucency of each frontal sinus only. As rhinoscopy was negative a conservative therapy was initiated. On June 23rd, as the vision had sunk to 6/60 and the central scotoma had become absolute, the right frontal and ethmoidal sinuses were operated upon by the external line of approach. The lining mucosa was found to be injected. On July 2nd the vision had recovered to 6/8 and the other symptoms subsided.

An examination in September gave a visual acuity of 6/6, with no enlargement of the blind spot but a marked diminution of the field for green. There was noticeable pallor of the right disc. Irregular alterations of the nerve fibres were visible with the red-free lamp. A neurological examination on October 12th showed definite evidence of incipient multiple sclerosis.

Bergmeister is of opinion that, even in this case, there was justification for opening the nasal sinuses. He records Behrs' opinion that the causative virus of multiple sclerosis gains an entry through the nasal sinuses and recalls Réthi's demonstration before the laryngologists and ophthalmologists of Vienna of cases of multiple sclerosis which were improved by operation upon the nasal sinuses.

He is of opinion that negative evidence of nasal sinus disease at operation does not disprove the rhinogenic ætiology of acute retrobulbar rhinitis, and that the various clinical pictures of orbital and optic nerve complications in cases of rhinogenic infection may perhaps best be explained by the variable anatomical relationships

which exist between the nerve and the sinuses. These cases should be treated in an expectant manner for from eight to fourteen days, by means of adrenalin compresses in the middle meatus, diaphoresis, protein-therapy, etc. If the central scotoma fails to improve to the point of disappearance, drainage of the nasal sinuses is indicated.

J. B. HORGAN.

The Importance of the filtration properties of the Nose in the prevention of Pulmonary Silicosis. G. LEHMANN. (*Münch. Med. Wochenschrift*, Nr. 30, Jahr. 80.)

By means of an instrument (illustrated and described) Lehmann was able to determine the percentage ability of the nose to fix the impurities (Staubbindungsvermögen) of the respired air. In a series of experiments carried out upon quarrymen who were exposed to the danger of pulmonary silicosis, Lehmann found that in men whose percentage ability of nasal fixation was under 30 per cent., lung disease was sooner or later inevitable, whilst in men in whom this capacity was over 40 per cent., the tendency to lung trouble was almost nil.

J. B. HORGAN.

The arrest of Hæmorrhage from the Throat and Nose. DR. GUTTLICH. (*Münch. Med. Wochenschrift.*, Nr. 24, Jahr. 80.)

The so-called nasopharyngeal plug to control intra-nasal hæmorrhage should give way to the use of a plug of such dimensions, that it can be forcibly drawn forward into the choana by means of its attached thread. In this way the tube ostium is not occluded and the plug can be allowed to remain *in situ* for some days without fear of infective ear complications. The anterior nares are plugged by means of small strips of gauze which are carefully inserted through the speculum and packed successively and horizontally above the floor of the nose. In severe cases of recurrent arterial hæmorrhage it is recommended to tie the internal maxillary artery. The latter is exposed by opening into the maxillary antrum from the canine fossa, and then removing its posterior wall, external to the choana. The author has successfully employed this method in two cases.

J. B. HORGAN.

Studies of Nasal Cilia in the Living Mammal. ARTHUR W. PROETZ. (*Annals of O.R.L.*, 1933, xlii., 778.)

It has been reasonably pointed out that extirpated membrane may render a false picture of ciliary action, both on account of the severance of nerve connection, and also the trauma necessitated by the removal. The examination of the human sinus lining in a living subject, with sufficient magnification, is barely within the realms of

possibility, but much can be gained by a parallel study of the mucosa of a living rabbit with extirpated human membrane. The apparatus used consists of a microscope, the stage of which is fitted with a clamp for holding the head of the rabbit, and a vertical illuminator to supply the illumination. A cinematograph camera is fitted, to enable photographs to be taken. Close by the field to be examined is an arrangement of capillary tubes by which fluid may be introduced without flooding—one of the tubes being attached to a suction apparatus which removes all excess.

The findings in the living rabbit and the extirpated human mucosa were identical in all experiments. The time required for a single cycle of motion of the cilia varies from one-fourth to one-tenth of a second, and the direction of wave propagation is, or at least can be, in the opposite direction to that of the effective stroke.

The effect of drying the mucosa by jets of air is to cause an inhibition of the ciliary action, and if this inhibition is allowed to continue for fifteen to eighteen minutes the action cannot be re-established.

The author considers that a similar condition occurs during life in cases of partial closure of the nasal chamber by chill or local irritation. The inspired air reaches the nasopharynx in jets which dry patches of mucous membrane and paralyse the cilia, and this may be the determining factor in laying the mucous membrane open to infection.

The article is illustrated by excellent diagrams and micro-photographs.

E. J. Gilroy Glass.

ŒSOPHAGUS

Accidental Perforation of the Œsophagus : Gastrostomy, Recovery—A Plea for Retrograde Dilatation in Small Size Strictures. Charles J. Imperatori. (*Annals of O.R.L.*, 1933, xlii., 799.)

Small size strictures, measuring 15 on the French gauge or less, and of some chronicity, are in the author's opinion best treated by retrograde methods both on account of safety and of the prospect of permanent cure. Particularly is this so in children, as stagnation of food frequently causes ulceration above the stricture.

A case is described of a man who, seven years before, developed an œsophageal stricture from swallowing acid. This was treated by gastrostomy and retrograde dilatation, ten dilatations being done in a period of two and a half months, after which the patient could swallow well. He was then lost trace of for five years, during the first three years of which he had no difficulty in eating any type of

food. During the last two years, however, he had found it necessary to pass a rubber bougie before each meal.

He again came under observation in July, 1932, having been admitted to hospital on account of a piece of meat having become impacted above the stricture. This was removed and an attempt made to dilate, but unfortunately the œsophagus was perforated and an X-ray picture taken immediately afterwards showed the opaque medium extravasated into the mediastinum. An immediate gastrostomy was performed and the patient was forbidden to swallow, even saliva. Apart from a basal pleurisy, recovery was uneventful and all symptoms of mediastinitis had cleared up within two weeks. The retrograde dilatation was then continued and the stricture is now sufficiently open to permit of swallowing.

In his commentary on the case, the author suggests that the patient owes his life to two factors, first that the repeated traumatisation thrice daily with a bougie for two years had made the mediastinum less vulnerable, and secondly, the putting of the œsophagus at rest by gastrostomy and the attempts to keep the saliva out of it lessened any further infection.

E. J. Gilroy Glass.

Retrograde Gastroscopy and Œsophagoscopy. Georg Lotheissen. (*Wiener Klin. Wochenschrift*, Nr. 44, Jahr. 46.)

Lotheissen used an endoscope 11 cm. long and of 11 mm. diameter with inner illumination made by the firm R. Thurriegl. The lamp is kept clean by means of a pneumatic pump.

The stomach fistula should be as near as possible to the cardia and should exist for eight to ten days prior to the use of the instrument. The fistula is anæsthetised with $\frac{1}{4}$ per cent. solution of tutocain and, if necessary, dilated with Hegar's dilators. The examination is carried out in the horizontal position or with the head at a slightly lower level than the fistulous opening. With a little experience it is easy to distinguish the cardia which shows from four to five folds. A little air pressure suffices to open the cardia and permit of the inspection of the *pars abdominalis*. The hiatus, which appears as an oblique slit, is more resistant and does not open to the air pressure alone.

The chief value of this retrograde examination is the facility with which it allows the recovery of the swallowed thread. It provides for direct observation and treatment of affections of the gastric mucosa.

In cases of œsophageal obstruction an English gum-elastic bougie is passed upwards through the lumen to the obstruction after which the œsophagoscope is passed over the bougie to the stenosed area. It facilitates the use of the electrolytic or the continuous bougie. Retrograde œsophoscopy allows of a differentiation between

stenosis due to the disease of the œsophagus itself and that due to pressure from disease of the surrounding structures. It is feasible in cases of kyphosis. It can advantageously be employed for the removal of difficult foreign bodies such as dental plates, and for the recognition and removal of those polypoid tumours (myoma, lipoma and fibroma) which may occur at the lower end of the œsophagus and which, in spite of their small size, may occasion severe stenosis.

J. B. HORGAN.

MISCELLANEOUS

X-ray Treatment of Carcinomata of the Oral Cavity and the Upper Air Passages. J. BORAK. (*Wiener Klin. Wochenschrift*, Nr. 44, Jahr. 46.)

The division of the radiation over a long period (fractional treatment) is the outward distinctive characteristic of Coutard's method of radiation. Its secondary external characteristics consist in the protraction of each period of radiation, by the use of special thick filters and by increasing the distance between the radiated surface and the tube. The dose used must be sufficient to destroy the squamous epithelium in the vicinity of the tumour, without a similar implication of the other tissues. Borak considers that the fractional administration of the dose is of essential importance and, on practical grounds, ceases to protract the dose. He is satisfied that when the dose is ample, but not excessive, the desired destruction of the growth takes place without untoward incident.

Coutard's method demands the highest technical knowledge and experience on the part of the radiologist, and the greatest fortitude on the part of the patient, owing to the length of the treatment and its attendant discomforts and physiological derangements. The total dosage ranges from 6 to 15,000 international Röntgen units. The series of radiations, which must be applied daily without intermission, lasts from three to five weeks.

In a series of cases in which Borak employed the Coutard method (without protraction of the dosage) the results were as follows: Of three carcinomata of the epipharynx one was cured, of two of the tongue one was cured, of four of the palate and the cheeks four were cured, of seven of the tonsils six were cured, and of eleven of the larynx ten were cured. He therefore succeeded in effecting a macroscopic disappearance of the primary tumour in twenty-two cases out of twenty-seven carcinomata of the oral cavity and upper air passages which, allowing for the possibility of reactivation, metastases, or other complication, must be looked upon as a very considerable advance in the treatment in carcinomata of these regions.

J. B. HORGAN.