restore nasal breathing. In such cases one must assist Nature with respiratory exercises.

Of the 38 per cent. of failures, 4 per cent. are due to the persistence of nasal obstruction, 14 per cent. to glossoptosis and 20 per cent. to a defect in the mechanism of readaptation to nasal breathing. It is these latter cases which respond so well to breathing exercises.

DISBURY said he had experimented with compressed air douche treatment, which he found a very useful addition to the usual breathing exercises.

G. WORMS did not consider that the removal of adenoids always solved the problem of respiratory obstruction in children. He recommended rubber tubes in the nasal fossæ. He found this method perfectly harmless and a useful adjunct to breathing exercises.

Compressed Air Tube in the Nasal Fossæ in Cases of Epistaxis—G. WORMS and G. F. GAUTIER.—The apparatus consists of an outer envelope of thin rubber. Through the lumen of the envelope passes a rigid tube which allows the air to circulate freely to and from the nasal fossa. The outer envelope and the tube are connected together at their extremities, and leave a free space which can be inflated at will by means of a pneumatic bulb. Nasal breathing can be carried on, and at the same time the outer envelope is in firm and extensive contact with the nasal mucosa.

This apparatus can be used advantageously after a submucous resection or after the division of adhesions.

G. LAURENS raised the objection that the apparatus was painful; at the same time, he admitted that it was efficacious and easy to insert.

ABSTRACTS

SURGICAL DIATHERMY

(*Abstracted by H. V. Forster, F.R.C.S., from the Acta Oto-Laryngologica*, vol. vii., Fasc. iv.)

1. *Surgical Diathermy in the Region of the Head and Neck*, by Franz Nagelschmidt, Berlin.

The author describes how a deeper coagulation effect may be obtained with less volume of current by the suitable placing of the indifferent electrode; if placed at a distance, the current follows the line of least resistance and any directing effect is lost. Weaker currents cause weaker depth effects than strong ones, and obviate drying up of the tissue and charring.

After surgical diathermy, the zone of hyperæmia and lymph pressure tends to exudation and not to absorption. During the healing process

epithelialisation is rapid, so much so that measures may have to be taken to prevent keloid formation.

The author does not favour the use of a small apparatus, but considers a powerful machine necessary for successful work and particularly for the control of bleeding. He employs a foot-pedal switch.

His methods of treating various types of disease are described. For lupus of the mucous membrane diathermy is preceded by irradiation with hard rays and, after operation, pyrogallic ointment packing, from 2 to 5 per cent. is used to prevent too rapid epithelialisation. To obviate contraction at the corners of the mouth, for example, pyrogallic vaseline, 1 per cent., is applied daily.

In cases of lupus of the ear energetic treatment is called for with destruction of the cartilaginous parts.

The author makes use of it for the removal of the tuberculous uvula, and, when tuberculosis attacks the larynx, deep hard rays are first employed which cause granulations to become flattened; by using suspension laryngoscopy less current is needed. Only slight glottic œdema results and there is immediate relief from dysphagia.

Diathermy is considered valuable for the bloodless extirpation of the tonsils. Removal may be carried out even in an acute infection with high fever, the temperature falling by crisis in a few hours, with only occasional subfebrile elevations later. If the tonsil is not fibrous, but of the soft variety, it may be taken away piecemeal by coagulation and curettage.

In angiomata and cavernomata of the skin and mucous membrane, the method is valuable, but the electrode should be laid on the surface and not pierce the structure, otherwise bleeding results.

Finally, the treatment of eradicable and ineradicable malignant tumours is discussed. In the ineradicable variety a combination of diathermy and hard rays is employed.

Some illustrations of electrodes and apparatus are shown, and a number of plates added to illustrate certain cases.

2. *The Treatment of some Cancerous Growths by Diathermy*, by Norman Patterson, F.R.C.S., London.

The general principles underlying the surgical use of the diathermy current are discussed, and there is an illustration of the author's handle for the active electrode, with various applicators. The method of diathermy excision of a tumour is described in detail, also the method of piecemeal removal.

The advantages of diathermy over methods which depend on the use of sharp-cutting instruments were stated in his article in the *Lancet*, 6th December 1919, and these statements, which he reviews briefly, still hold good.

He considers that the only rational attitude for the surgeon to take up in every case of cancer affecting the mouth or pharynx is that there is glandular involvement. He favours an extensive removal of glands by block dissection when necessary, and carries this out and performs preliminary ligation of vessels on the affected side as a first stage of the operation; the tumours are removed two or three weeks later. At the second operation the external carotid vessel on the side opposite to the tumour is also ligated.

The writer does not favour the use of diathermy for growths situated within the larynx, but the epiglottis and anterior part of the aryepiglottic folds are excepted. The method is not suitable for growths in the pyriform fossa and in post-cricoid cancer the cartilage would be jeopardised.

Treatment of nasopharyngeal cancer is liable to be unsatisfactory, and one must work through the divided palate. The use of diathermy for nasal and accessory sinus carcinoma generally requires preliminary exposure by cutting and often through bone. The proximity of brain and orbit calls for special caution.

3. *The Treatment of Malignant Tumours of the Upper Air Passages by Diathermy*, by Douglas Harmer, F.R.C.S., London.

In England the first operation of surgical diathermy was performed in the Throat Department of St Bartholomew's Hospital by Professor Nagelschmidt, introduced by the late Dr Lewis Jones. A large pedunculated tumour of the nasopharynx was burnt away and an excellent result obtained.

Since 1910, there has been a tendency to use diathermy in preference to the knife.

The treatment of malignant tumours in various situations is discussed. After treatment of epitheliomata of nose, eyelids or face, radium should be packed into the wound for several days in advanced cases. In cancer of the mouth where bone is involved a wide area must be destroyed. In cancer of the tongue, the ulcer is coagulated and then widely excised. In favourable palate cases, glands in the neck need no treatment as a rule.

In tonsil growths, where tongue and fauces and the glands usually share in the disease, a fairly strong dose of X-rays precedes operation, larger doses following ten to twelve weeks later, after the operation and excision of glands.

The various types of malignant growths of the nasal fossæ, maxilla and antrum need to be approached through the mouth or by Moure's method. Radium is packed into the wound.

Abstracts

4. *Diathermy and its Applications in Oto-Laryngology*, by Georges Portmann and Noël Moreau, Bordeaux.

A brief historical survey is given of the development of diathermy in France. The idea of diathermy evolved from the method of fulguration by high frequency currents.

The general principles of the formation of diathermy currents is described and the technique of its employment. Its immediate effect in various localities, the question of secondary hæmorrhage and the types of electrode, the diathermic snare not being favoured, are discussed.

In the nose, diathermy is of service for chronic tuberculosis and lupus and post-lupoid atresia, in the treatment of angiomata and papillomata; it is also the method of choice for membranous choanal atresia and for post-operative synechiæ.

The authors have no experience in malignant nasal tumours. In the nasopharynx it is employed for cicatrices and vegetations about the Eustachian orifices in hopeful cases of deafness.

For nasopharyngeal fibromata *morcellement* after coagulation is recommended (Samengo).

In malignant disease they have not sufficient experience to make a definite statement.

In the oro-pharynx it is useful to reduce tonsillar hypertrophy, but "cold steel" remains the best for complete removal. It can be used for pharyngomycosis when all else fails. For malignant tumours, for which it is favourable, the needle electrode is preferred.

In the larynx it is useful in lupus and considered undoubtedly superior to the galvano-cautery in such selected cases where the latter would be used.

Unfavourable for diffuse papillomata in children; it has given valuable results in adults with pronounced reaction. It is not advised for cicatricial stenosis.

In malignant tumours it is used to coagulate the trench after removal.

5. *Experience in the Surgical Treatment of Malignant Upper Jaw Tumours*, by Gunnar Holmgren, Stockholm.

The diagnosis and operative treatment of upper jaw tumours must be the duty of the rhinologist. Statistics dealing with the numbers admitted to hospital during the successive years from 1910 are discussed, as also are the types of cancer and of sarcoma, the age of the patients, and the cases operated upon and that on which no operation was done. The actual site of origin of the disease is sometimes difficult to place.

Since 1922, surgical diathermy has been employed in all cases of malignant upper jaw tumours. The central mass of the tumour in

the antrum is coagulated through a small hole and then the jaw or part of the jaw is taken away. The posterior nares are plugged and secretions removed from the throat by suction. It must be noticed that the nasal mucous membrane and also the mucoperiosteum of the sinuses may appear normal and yet be riddled with cancer.

The lower part of the ethmoid and sphenoid may be coagulated, but only fulguration should be applied to the roof of the nose. The frontal sinus cavity is not treated by diathermy.

Ligature of large vessels is not performed before operation. During the danger period, two weeks later, patients are under close observation for secondary hæmorrhage.

If it is desired to ligature the external carotid, this is best done one week after operation.

The prognosis after removal of malignant upper jaw tumours is discussed, and the statistics of other workers quoted. Radiological treatment is in the majority of cases combined with diathermy.

6. *The Treatment of Buccal Carcinomata*, by Elis Berven, Stockholm.

Buccal cancer is a relatively rare and exquisitely malignant form of tumour with a marked tendency to spread on the surface and in depth and to produce early metastasis. The several methods of treatment are compared.

With surgical treatment 15 per cent. are symptom-free after three years. With X-rays alone results are bad. With radium along with X-rays, results vary according to the development of technique, and the latest statistics of the Memorial Hospital, New York, show 35 per cent. symptomless after two or more years.

The results between 1909-1925 at the Radiumhemmet, Stockholm, where the author works, show 18 per cent. symptom-free for four to ten years, but of eight cases published in 1917, 35 per cent. are symptom-free after ten years.

With electro-coagulation 36 to 38 per cent. are symptom-free after two years, which is about the same as with radium treatment alone in institutions with a highly-developed technique and with great quantities of radium at their disposal. But electro-coagulation has a series of advantages over radium treatment. (1) It is easier to carry out. (2) Immediate relief from pain is attained with no severe reaction and no risk of secondary atrophies and necroses. (3) Only a few local relapses occur.

With electro-coagulation, however, there must be a certain percentage of operation and post-operative mortalities.

The occurrence of gland metastases makes prognosis, of course, very grave in both electro-coagulation and radium treatment, and the

best way to deal with the gland metastases is by a combination of surgical clearing out of the gland area, implantation of radium seeds at operation and, afterwards, by heavy doses of filtered radium at a distance.

7. *Diathermy and Electro-coagulation in Diseases of the Upper Air Passages*, by Gustav Spiess, Frankfurt A/M.

The nature of diathermy, the types of electrodes used, and methods of anæsthesia employed are discussed. Many forms of tuberculosis and lupus are suitable for electro-coagulation. In lupus of the skin—for example, at the edge of the nostril—a combination of methods is employed as suitable to the individual case; gold therapy, tuberculin, crysolganin. If these fail the granules are destroyed by diathermy or hot-air cautery. After the reaction has subsided Röntgen deep therapy is employed, and during the whole course of treatment artificial sunlight baths are given.

The same holds good for lupus within the nose, but diseased parts of the middle and inferior turbinals should be removed radically at the beginning.

In the mouth and pharynx electro-coagulation is only to be employed for severe tuberculous affections. Healing is slow in comparison with the galvano-cautery, though the former is more effective in destroying the disease.

Diathermy should be used in the larynx only with great caution, and then may be employed for infiltration in the interarytenoid space and on the ventricular bands. One should beware of touching cartilage and always be prepared for considerable reactive swelling. If stenosis is present diathermy is contra-indicated without a tracheotomy, but if this has been performed it may be used for the stenosed parts as well as the tuberculous tissue.

For the removal of tonsils the author sees no advantage except in cases of hæmophilia, when X-rays or radium applications are preferred.

8. *Surgical Diathermy in the Treatment of certain non-cancerous Affections of the Upper Air Passages*, by Henri Bourgeois and Gaston Poyet, Paris.

Benign Tumours.—Angiomatous tumours of the nasal septum are successfully treated by using the wet electrode.

Angiomata of the palate and tongue are attacked by diathermic electro-puncture. A case of very extensive angioma of the laryngeal orifice is described in detail, an excellent result being obtained at three sittings by electro-puncture. The patient wore a tracheotomy tube which had been inserted for previous urgent symptoms.

A large cyst of the base of the tongue for which pharyngotomy had been advised was cured by diathermy.

Chronic Tonsillar Affections.—Reduction or destruction of the tonsil at several sittings is described in detail. This method is used in hæmophiliacs, elderly people, and for patients who will not submit to the several days' incapacity subsequent to tonsillectomy by the usual method.

Diathermy may be used for the cure of benign mycosis of the tonsil and base of tongue.

Chronic Tuberculosis.—No matter in what form, the mucocutaneous variety included, tuberculosis is treated by diathermic coagulation. In the nose, when there is much granulation formation with nasal obstruction, a wet electrode is employed to destroy a considerable amount of pathological tissue and is then followed by the detailed employment of the small dry electrode as in earlier cases.

Laryngeal Tuberculosis.—The use of diathermic coagulation is restricted. Galvano-cautery is the method of choice, partly because there is a greater tendency to the formation of scar tissue afterwards. But diathermy may be successfully used for coagulation of the epiglottis to relieve dysphagia when the organ is much diseased.

Nasal Synechiæ.—The best treatment is by diathermic coagulation, but when thick more than one sitting is required.

Choanal Atresia.—When this is membranous, diathermy should be used. When bony, an operation by gouge and curette is performed, and later, when a fibrous recurrence takes place, diathermy is used with success.

Velo-pharyngeal Stenosis.—The results of ordinary surgical methods are so unsatisfactory that the question has arisen whether it is not better to leave them alone. Syphilitic stenoses have not been treated by the writer, only the post-operative cases. The soft palate is freed by diathermy, and then, after healing has taken place, it has been necessary to keep up dilatation by graduated bougies. Considerable success resulted in these cases, and it is considered the method of choice.

9. *The Uses of Surgical Diathermy in Oto-Laryngology*, by Dan McKenzie, London.

The article deals with the uses of surgical diathermy under two main headings: (1) Simple forms of disease, and (2) cancer.

In the first group it is ideal for synechiæ as compared with the galvano-cautery; in obstinate epistaxis it is better than the galvano-cautery and is applied either by fulguration or coagulation, but one must beware of a perforation of the septum. It has no advantages over the ordinary method for removal of the tonsil outside its capsule, and the author has no experience of piecemeal removal of the tonsil by diathermy. He has not been successful in using it for post-luetic obstruction of the postnasal space, or choanæ.

It is useful in lupus of the nose and pharynx, where treatment by light is impracticable.

In the treatment of cancer in the pharynx diathermy is the best method; its action is destructive and antiseptic. He describes its use in (*a*) eradicable and (*b*) non-eradicable cancer. In (*a*) the primary growth is removed by diathermy, and the lymphatic glands draining the diseased area by a combination of ordinary dissection and diathermy, and further, an attempt may be made by diathermy puncture of the tissues between the primary growth and gland area to inhibit the spread of cancer through the intervening region.

He first of all proceeds to the operation upon the neck with ligature of the external carotid. One must beware of causing a fistula into the pharynx by diathermy puncture at this stage. The wound is drained. One or two weeks later the primary growth is removed from the pharynx, an attempt being made to seal the growth and then with the diathermy terminal to remove it, if possible, through healthy tissue $\frac{1}{4}$ inch away.

In (*b*) non-eradicable cancer, if the condition is extensive, with marked gland involvement, no operation will succeed. If glands are moderately involved, they are treated by diathermy puncture with primary closure of the wound.

Concerning the growth, this is coagulated and scraped away with a curette, and a gridiron puncture of the more healthy tissue carried out. Treatment may need to be repeated for recurrence.

He favours diathermy as a sterilising measure, as cancer cases often die partly of sepsis and sometimes of septicæmia.

In post-cricoid cancer the author prefers radium as a palliative; abscess in the neck has followed attempts with diathermy for this disease.

He does not employ it for cancer of the œsophagus. In cancer of the auricle he observed that bone may be destroyed without anxiety. It had been useful in one case of endothelioma of the antrum, and disappointing in lymphosarcoma of the tonsil, radium proving only a little more useful in the latter.

10. *Diathermy*, by Sir W. Milligan, Manchester.

The advantages and disadvantages of diathermy are first of all tabulated. When infected glands are to be removed in association with a malignant growth, the author prefers to deal with the glands first and to ligature either lingual or external carotid arteries. After an interval of eight to ten days the primary growth is either removed with the diathermy knife or destroyed with a combination of the button and needle electrodes. A current of 800 to 900 milliamperes is suitable for small growths and 1 to 2 amperes for large ones.

In debilitated and toxic cases the growth may be attacked in stages. Destruction of bone is an advantage rather than otherwise when the question arises.

In laryngeal tuberculosis diathermy may be useful when the disease is limited to the epiglottis or posterior laryngeal wall. Its results are favourable and rapid in lupus of nasal skin or mucous membrane.

In hypopharyngeal carcinoma no particular result has been obtained so far. It is useful for nasopharyngeal tumours, associated with attacks of hæmorrhage. For all cases sterilisation and relief of pain may be obtained. In tonsil, faucial and palatal cases several patients are alive after five to seven years.

11. *Indications for Surgical Diathermy in Rhino-Laryngology*, by C. A. Torrigani, Florence.

The author does not recommend the use of the so-called wet electrode in diathermy. A foot-pedal switch is particularly useful when operating upon the larynx. He employs local anæsthesia as a rule, surface cocain with injection of novocain-adrenalin.

In epithelioma of the larynx an open operation is performed aided by diathermy. In such a case one patient refused an external operation. A growth of the anterior commissure was therefore removed by the direct endolaryngeal method and a recurrence later was successfully treated by diathermy.

In pharyngeal epithelioma diathermy is successful as regards pain and dysphagia, and the state of mind of patients rejected by colleagues as unfit for X-ray and radium treatment; on this point he confirms the observations of a number of other workers.

Success in a case of sarcoma of the nasal septum is reported, where X-rays and radium had caused much reaction.

In benign tumours the best results are obtained, and in angiomatous tumours the needle puncture method is most valuable. Excellent results follow the treatment in papillomata of nose and larynx. One case of nasopharyngeal fibroma did well with the needle electrode.

In chronic nasal and laryngeal tuberculosis the vegetative and tuberculomatous types are treated, but in the tuberculous larynx it does not replace the galvano-cautery, with which the sclerosing action is more marked.

Diathermy is useful in synechiæ of nose, choanæ and larynx.

The palatine tonsil is only approached by diathermy in bleeders and nervous people, and then at several sittings.

12. *The Treatment of Malignant Tumours by Diathermy*, by E. P. Cumberbatch, London.

The article describes the early development of the use of diathermy for malignant tumours at St Bartholomew's Hospital, where the method

was first used in this country. The method of coagulation is that now practised by many workers, and its advantages and the precautions necessary in carrying out the method are described. Its usefulness in cases of rodent ulcer, carcinoma of the breast and the cervix uteri are described.

13. *Electro-coagulation of Malignant Laryngeal Tumours under Suspension Laryngoscopy*, by Frank J. Novak, Chicago, U.S.A.

It has been the writer's practice to apply diathermy in the treatment of malignant new growths of the larynx, approaching the mass under the guidance of suspension laryngoscopy, except when the use of this is contra-indicated. A laryngofissure is then performed.

The former method is particularly adapted to the following types of cases:—

(1) When the tumour is located largely above the glottis.
(2) When there is no extralaryngeal involvement.
(3) In those patients most favourably suited to suspension laryngoscopy, *i.e.* with long thin necks, thin mouth and tongue, good teeth and normal epiglottis.

The author makes some remarks upon suspension laryngoscopy and laryngofissure; when the latter approach is used, Irwin Moore's technique is followed.

The button or ball electrode as opposed to the needle electrode is favoured, and the coagulum removed in layers by a curette.

Important contiguous structures — nerves and vessels — are not injured, and the writer has confirmed these observations by experiments on the dog. Some remarks on possible accidents are appended, but the possibility of or the effects of laryngeal cartilage necrosis are not mentioned.

14. *The Application of Surgical Diathermy in Tumours difficult to operate upon in the Region of the Ear and the Upper Air and Food Passages*, by Cæsar Hirsch, Stuttgart.

Three cases are quoted in which good results have been obtained. One, a woman, with an extensive malignant tumour involving the right ear with extensions towards the posterior and middle cranial fossæ, and the labyrinth, and also into the processus zygomaticus and parotid gland. Six months after operation the patient was in a relatively good condition.

The other two cases described comprise a malignant growth of the right tonsil and one of tumour of the left cheek.

The author discusses the necessity of suitable electrodes and handles for use in surgical diathermy and suggests improvements upon existing designs.

The Ear

15. *Electro-coagulation in Oto-Rhino-Laryngology*, by Etienne Marteret, Paris.

A description of the general principles of the production of the diathermic current is given. As an example of the coagulation of tissue by this method the effect on a palatine tonsil is described. One should be guided more by the effect produced by the electrode than by calculations from the size of the electrode, the intensity of the current and the tissue acted upon.

As a result of a number of observations the writer concludes with remarks upon the utility of diathermy in nasal synechiæ, in nasal tuberculosis and velo-palatine adhesions. With regard to the destruction of the palatine tonsil he advises diathermy in the following types of patients:—

(Pusillanimous)
Hæmophiliacs.
Arterio-sclerotics; and in
Singers.

It is a most valuable auxiliary method of treatment in cancer of limited extent, when radium and deep X-ray therapy are to be employed in conjunction.

THE EAR.

On Latent Otitis. G. ALEXANDER, Vienna. *Zeitsch. für Hals-, Nasen-, und Ohrenheilk.* Bd. xiv., Hefts 1 and 2.

Alexander considers that otitis can be called latent only when there are no symptoms complained of by the patient and no signs of local inflammatory changes on examination; but the later course of the disease makes it certain that such changes must have been present. He distinguishes four forms of latent otitis: 1. The latent otitis resulting from numerous previous attacks; 2. latent otitis of the empyema type; 3. latent meningitic otitis interna; 4. latent otitis externa.

The empyema type is the one in which purulent secretion is sucked into the middle ear from the nasopharynx. It occurs—1. in infants suffering from dyspepsia; 2. in older children of a weakly disposition with adenoids and purulent affections of the nasopharyngeal tract and lungs; 3. in children with severe acute general infections; 4. in atrophic, under-nourished, tuberculous or syphilitic children; 5. occasionally in dying infants; 6. in adults who are suffering severely from some other illness. Shortness and patency of the tube as in childhood, old age, and wasting diseases favour its development.

Otitis media is somtimes latent in "mucosus" otitis, in diphtheria, tuberculosis and typhoid. From physical causes narrowness of the tympanic cavity predisposes to latent otitis media.

Abstracts

Otitis interna may escape observation up to the development of deafness. Otitis externa may be comparatively painless in tuberculous and anæmic, "run-down," or old people in whom the external canal is loose or collapsed.

Among other helps to diagnosis the presence of leucocytosis with normal ratio of neutrophile to eosinophile elements is noted. In doubtful cases paracentesis renders good service.

JAMES DUNDAS-GRANT

THE PHARYNX.

The Partitioning of the Vault of the Nasopharynx. HENRI RAZEMON, Lille. (*Achives Internationales de Laryngologie,* April 1926.)

This paper is the outcome of the observation that cases of nasal obstruction, which in a surgical sense had been successfully operated upon by the removal of adenoids or by the resection of a deflected septum, continued, nevertheless, to give inadequate functional results.

The anatomy and comparative anatomy of the nasopharynx are discussed, from which it is concluded that, exceptionally, the cavum pharyngis may be subdivided by a bony or membranous partition into two antero-posterior recesses.

Clinically, this condition is best recognised by palpating the nasopharynx. It is frequently associated with an enlargement of the posterior, and particularly the anterior, extremity of the inferior turbinate bone.

Treatment consists in introducing, "by the mouth," a strong pair of punch forceps and, guided by the index finger, twisting off portions of the bony partition.

A number of cases are quoted in which this operation has been successfully carried out. MICHAEL VLASTO.

Two Cases of Nasopharyngeal Fibroma in Infancy. AURELIO DI CORE. (*L'Oto-Rhino-Laryngologie Internationale,* March 1926, p. 97.)

These cases are described in detail owing to the rarity of nasopharyngeal fibroma in the infant. The first case occurred in a male infant aged 18 months. Symptoms had been present from the age of 6 months, and, on examination, a large tumour was found filling the nasopharynx and pushing forwards into the nose. The growth was removed by a snare through the mouth, and its site of origin could be felt from the roof of the nasopharynx. Histologically the tumour showed the characteristic structure of a fibroma, and two years later the child was alive and well.

The second case was a male infant, aged 2 years. Symptoms of nasal obstruction and discharge had been present from birth. A

tumour filling the nasopharynx was removed with forceps through the mouth, without an anæsthetic. Histologically the tumour was a pure fibroma, and fifteen months later the child was living and well.

The author points out that the classical description of these tumours as being confined to males between the age of puberty and 25 years, does not universally hold good. Several undoubted cases have been observed in females, and these two cases demonstrate that the condition may start in earliest infancy. A. J. WRIGHT.

MISCELLANEOUS.

Thrombosis of the Superior Thyroid Vein from a Cervical Abscess between Larynx and Thyroid: Diagnosis made at Autopsy. H. HASTINGS. (*Laryngoscope*, Vol. xxxv., No. 6, p. 423.)

The patient was a healthy adult, who complained of a little soreness in the left side of the neck. This continued for a few days and then became severe and spasmodic. There were severe contractions of the sternomastoid muscle on the same side. Examination revealed tenderness over the sternomastoid about one and a half inches above the clavicle. The condition was thought to be a deep-seated adenitis. On the following day, the isthmus of the thyroid became tender and the first chill occurred. The temperature now commenced to swing, with heavy sweats as the temperature came down. Chills and sweats followed with very high temperature and pain was felt on the right side of the neck also, with tenderness in the same area as on the left side. The patient now had an evident septicæmia, but apart from tenderness in the neck, no induration or anything justifying an exploratory incision could be found. There was a little coughing and expectoration of blood-stained mucus. Post-mortem showed the lungs to be the seat of old tuberculosis; the kidneys were swollen and showed many small punctate hæmorrhages. In the neck, on dissecting the muscles, from the thyroid gland, it was found that the superior thyroid veins were thrombosed and contained pus. Behind the upper pole of the left lobe of the thyroid gland was an abscess cavity with fœtid pus. The wall of the œsophagus was in contact with the abscess and was necrosed almost down to the mucosa. The abscess was believed to be an infection of an old tuberculous gland. From this, thrombophlebitis with rapid dissemination of septic emboli took place. ANDREW CAMPBELL.

Principles of Plastic Surgery in Operations for Malignant Growths of the Face and Cavity of the Mouth. ERTL. JANOS. (*Zentralblatt für Hals-, Nasen-, und Ohrenheilkunde*, 1925, Vol. viii., p. 244.)

Plastic surgery has greatly widened the field of operations. By reconstruction of the region of operation it is possible to eliminate

many sources of a prospective recurrence. One factor in recurrence is the extensive scarring which follows operation through inflamed tissues. Scars maintain continual mechanical irritation, and themselves show a tendency to malignant degeneration. During the contraction of scar tissue there is always some breaking down. Violent movements may cause splits, which become infected by the secretions. Care must be taken at the primary operation to avoid crushing or bruising the tissues; deep stitches should be avoided; dissimilar tissues must not be united. In the tongue, especially, the layers should be mobilised and united, layer by layer; this ensures mobility.

When the plastic operation is done (six to eight weeks after the primary operation) no granulation tissue must be left behind, as this might become the focus of a recurrence. Thiersch grafts from a distance must not be used, as they are liable to necrosis. If, for example, a part of the cheek is removed and the gap cannot be filled by suturing, neighbouring skin should be used, but if this is not possible, it is preferable to do without any covering rather than use the tube flap. In such wounds no attempt should be made to close them for another six weeks.

Prostheses placed between the ends of bones to prevent contraction and allow of normal movement are condemned. They only act for a short time, and they cause irritation and sequestration of the bone at the points of pressure. The subsequent granulations degenerate, and thus a fresh source of irritation is produced. (The author states that if a recurrence occurs in the region of such a prosthesis, the prosthesis is the cause.) After disarticulation of half the lower jaw no prosthesis is needed; if the reconstruction has been properly done there will be no displacement. After two to three weeks a light splint should be fitted to the remaining teeth to ensure correct articulation when in use. No false teeth should be worn for two years after the operation.

The success of the removal is first seen in the metastatic glands. Inflamed glands shrink and the swelling of the neck disappears. Infiltrated glands also shrink with the decrease of the inflammatory swelling. Removal of glands should not be undertaken until all inflammatory signs have subsided. If the glands are difficult to isolate it shows that the removal of the primary focus has been incomplete. After removal of the glands the skin should be freely movable on the fascia and the whole area should be supple. If this is not the case, even although no other glands can be felt, early recurrence must be expected. If the general state is satisfactory cosmetic repairs can be undertaken two to three months after the removal of the glands.

F. W. Watkyn-Thomas.

Miscellaneous

Endocrine Glands in Oto-Rhino-Laryngology. Prof. A. BIEDL, Prag. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, April 1926, pp. 241-252.)

In a comparatively short article Professor Biedl gives a successful survey of this complex subject. In our specialty we are concerned with important sense-organs, viz., smell and taste, hearing and the static sense. The author believes that, on the whole, very specialised sense-organs are less dependent on endocrine influences than other organs, the functions of which are of more general interest to body metabolism.

Deafness in connection with thyroid deficiency is thoroughly dealt with, also the special forms of deaf-mutism occurring in cretins (Nager). In myxœdema the administration of thyroid very often leads to an improvement in the hearing. One is left in some doubt whether this is a purely central nervous effect, *i.e.*, part of the improved cerebral activity, or whether there is an actual change in the middle ear and cochlear apparatus.

There is some connection between the genital glands and the nose. Certain forms of dysmenorrhea can be controlled by cauterising the so-called "genital spots." The changes in the larynx, which occur at puberty under the influence of the testicular hormone, are discussed at some length. Otosclerosis, of course, has often been linked up with the activity of the ovaries.

More recently certain authors (Frey, Orzechowski) have seen a relation between the parathyroid and otosclerosis. The parathyroids control the calcium metabolism and in most cases of otosclerosis a diminution of the calcium content of the blood has been demonstrated (Voss, Leicher). In this connection it is interesting to note that the pure parathyroid hormone has recently been isolated under the influence of Banting, the discoverer of insulin. J. KEEN.

A New Diagnostic Sign in Facial Paralysis: Abolition of the Palmo-mental Reflex. A. RADOVICI, Bukarest. (*Presse Médicale*, 10th April 1926.)

In 50 to 60 per cent. of normal people stimulation of the skin of the palm of the hand causes a contraction of the skin muscles of the chin on the same side (Marinesco-Radovici Reflex). In cases where the facial nerve of one side is paralysed this reflex can be used to distinguish between an upper and lower unilateral motor neurone lesion, being present in the former case and absent in the latter. To be of significance it must, however, be present on the healthy side in both types of lesion, bilateral absence being observed in 40 to 50 per cent. of normal individuals. F. J. CLEMINSON.