cases by this method the question of dosage is of paramount importance, and it is essential to success that the initial dose should be very small.

Macleod Yearsley.

Rouvillois.—*A Case of Palatine Insufficiency.* "Rev. Hebd. de Laryngol., d'Otol., de Rhinol.," December 26, 1908.

The case described is that of a young adult male who suffered from a defect of speech, and slight occasional trouble during deglutition from food passing into the naso-pharynx. This condition was due to an inability to bring the velum into contact with the posterior pharyngeal wall. The defect had persisted since infancy; it was caused by imperfect contraction of the muscles, and not by an undue shortness of the velum.

Chichele Nourse.

Mouret, Jules (Montpellier).—*Median Pharyngotomy.* "Rev. Hebd. de Laryngol., d'Otol., et de Rhinol.," October 17, 1908.

The author explains his preference for transhyoid pharyngotomy instead of the subhyoid operation. Where the extent of the tumour to be removed renders the former procedure insufficient, it can be combined with median thyrotomy. This combined operation, of which a full description is given, serves for growths situated in the epiglottic region as well as for those which lie at a lower level in the laryngo-pharynx. When the epiglottis itself is not involved and is a hindrance to free access, it can be split in the median line, and the two halves re-united by sutures at the conclusion of the operation. A tube should be left in the œsophagus, and the cannula retained in the trachea for three or four days.

Chichele Nourse.

NOSE.

Horeau, A. (Nantes).—*A Case of Complete Functional Impotence of the Nose.* "Revue Hebd. de Laryngologie, d'Otologie, et de Rhinologie," December 26, 1908.

In this case the patient, a woman, aged thirty-six, had no mechanical obstruction to nasal respiration. A nasal spur and the anterior extremity of the inferior turbinal on the right side had been removed three years before with temporary relief. Then occurred a discharge of pus and crusts from the right nostril, which was followed by an atrophic condition and complete loss of the sense of smell on that side.

The patient was completely cured by a course of nasal gymnastics.

Chichele Nourse.

Steiner, M. (Budapest).—*A Contribution to the Further Study of Ozæna.* "Arch. für Laryngol.," vol. xxi, Part II.

The author has made careful observations of thirty-four cases of atrophic rhinitis with a view to ascertaining the relative frequency of the various symptoms and pathological conditions met with. Of these cases twenty-one were under twenty years of age and in several the disease was said to have been present since infancy. Seventy-eight per cent. presented a definitely characteristic type of facies, and this was apparently due to congenital shortness or imperfect development of the basis cranii. Atrophy of the middle turbinates was found in one third of the cases, and of the inferior turbinate in all but two cases. In only 15 per cent. was the disease associated with accessory sinus empyema.

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From the ætiological standpoint the writer distinguishes four varieties of atrophic rhinitis:

(1) Fränkel's form, apparently of congenital origin.

(2) A purely mechanical variety due to pressure-atrophy, and making its appearance after the removal of large, simple growths from the nose.

(3) Grünwald's form, resulting from accessory sinus disease or other chronic suppurative processes (adenoids, bursa pharyngea).

(4) The variety which follows syphilitic bone disease.

Thomas Guthrie.

Frese, O. (Halle).—*The Relations of Syphilis to Ozæna.* "Archiv für Laryngol.," vol. xx, Part III.

The author is careful to state that by the term "ozæna" he understands a diffuse disease of the nasal mucous membrane characterised by the three cardinal features of atrophy, crust-formation, and fœtor, and by complete absence of necrosis or ulceration. That syphilis bears some part, direct or indirect, in the causation of atrophic rhinitis, although denied by most observers, has been maintained by a few, among them Gerber, who found evidences of congenital syphilis in a "considerable proportion" of sixty cases of ozæna which he examined.

The writer argues from a material of sixty-one cases of ozæna, in which he made an exhaustive examination, not only of the nose, but of the whole body. Of these cases five presented characteristic and unmistakable evidences of congenital syphilis, and, at the same time, in the nose a typical ozæna without any trace of specific destructive processes Eleven more cases had with great probability been the subjects of congenital syphilis.

With the exception of a few instances in which the nasal affection appeared to have followed an acute infectious disease, there seemed in the author's cases to be but one probable ætiological factor, namely, congenital syphilis, a disease from which 26·2 per cent. of his patients had either very probably or certainly suffered. The conclusion is therefore reached that, in at any rate a considerable number of cases, ozæna is to be attributed to direct local damage to the nasal mucous membrane caused by the syphilitic virus during early life. It is further supposed that this damage results in a gradually advancing atrophy, which may only give rise to symptoms during later years.

It is held that the typical ozæna, which may apparently be due to congenital but never to acquired syphilis, finds its analogue in the "ozæna post-luetica," which follows tertiary syphilis of the nose, and is characterised in addition to its destructive features by the widespread atrophy, crust-formation, and fœtor of true ozæna.

Thomas Guthrie.

Richardson, C. W. (Washington).—*The Operative Treatment of Deflection of the Nasal Septum.* "Amer. Journ. Med. Sci.," February, 1909.

Previously to 1904 the writer had done "all his operative work on the septum" by a method of his own, which included the removal of a wedge-shaped segment of bone from the osseous septum, partly by means of the saw and partly by fracturing the nasal spine. Retentive apparatus (the Kyle aluminium splint) was used for seven days. He considers that this method yielded him unusually good results. There were, however, still a sufficient number of unsatisfactory cases to make an improved method desirable. Since 1904 he has performed 190 operations by the submucous method, and has become convinced that this is the method of choice

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provided that the operator possesses sufficient skill. During the last two years he has always employed general anæsthesia. His results have been uniformly good as regards relief of stenosis, contact with the turbinals and relief of reflex symptoms. He has had in all 3 per cent. of perforations, but only one in the last eighty cases. *Thomas Guthrie.*

Denker, A. (Erlangen).—*The Operative Treatment of Malignant Tumours of the Nose.* "Arch. für Laryngol.," vol. xxi, Part I.

After passing in review the various operations which have been employed, the writer gives a detailed description of his own method. He has hitherto made use of this method seven times for the removal of tumours, and twice for cases of extensive combined disease of a suppurative nature, involving the antrum and the ethmoid and sphenoid sinuses. Brief accounts are given of six of the seven tumour cases. Only one of the six cases has remained free from recurrence one and three quarter years after the operation; two other cases are, however, at present well, although in them a second operation was required. In all the cases the disease was advanced, and of a very unfavourable type, whether considered from the point of view of its situation or of its histological characters.

The writer claims for his method that it allows as good an exposure and as complete a removal of the growth as any of the other operations which have been suggested; that the cosmetic result is practically ideal; that the aspiration of blood during the operation can be almost entirely prevented and that without preliminary ligature of the carotid or tracheotomy; and that the after-treatment is very simple and of short duration. *Thomas Guthrie.*

Kubo, I. (Fukuoka, Japan).—*On the True Place of Origin of the Solitary Choanal Polypus, and the Radical Operation for its Removal.* "Arch. für Laryngol.," vol. xxi, Part I.

The author relates in full his observations on four cases of choanal polypus. He believes the condition to be always associated with inflammation or suppuration of the maxillary antrum, which as a rule contains polypi. The choanal polypus is in connection with the polypoid lining membrane of the antrum, and its stalk generally passes through the accessory ostium, which in this case is large and easily found with a probe. He prefers the name "antro-nasal" or "antro-choanal polypus," and believes that the condition is best treated by performing the radical operation on the antrum and removing its entire living membrane, and in one piece with it the "choanal" polypus, which can be drawn back through the accessory ostium and removed *viâ* the antrum. *Thomas Guthrie.*

Kahler, Otto.—*Congenital Bony Atresia of the Choanæ.* "Monats. für Ohrenheilk.," Year 43, vol. 1.

Commencing with a survey of the various classifications into which different writers have described this anomaly, Kahler suggests that it is most convenient to adopt the views held by Schwendts, and agrees with him that the bony occlusion of the posterior choanæ, which is doubtless of congenital origin, should be regarded as the typical form, whilst all other atresiæ, either membranous or bony, should be considered atypical.

He then gives a detailed account of nine cases which have come under his observation in Professor Chiari's clinic, and summarises the results

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in a most clear and exhaustive commentary. For the purposes of comparison and record twenty-one other similar cases published by various observers have been arranged with the author's own nine in tabulated form, thus adding considerably to the value of the article from the point of view of reference, though, indeed, those interested in the subject will certainly find the whole monograph well worth careful perusal.

Supported by the fact that there was no history or appearance of past inflammatory or infective lesions, such as lues, lupus or scleroma in his cases, Kahler commences his review by stating that he regards all of them as instances of "typical congenital bony atresia of the choanæ."

The condition occurred on both sides in two cases and on one side only in the remaining seven, but according to his researches amongst other accounts the bilateral lesion would appear to be nearly as often met with as that involving one side alone. Eight out of the nine patients were women, but again in consideration of other reports he thinks this inaccurately represents the right proportion, and regards it as purely accidental.

The posterior border of the hard palate and posterior edge of the nasal septum could be easily felt as projecting beyond the bony plate occluding the choanæ in all the nine cases, pointing to the fact that the atresia always really lies in a plane anterior to the posterior nares. No remarkable difference in size was noted between the occluded and normal choanæ, and the capacity of the nose was not found diminished.

The thickness of the plate of bone varied, being thinner in the centre than at the periphery—a matter of importance from a surgical point of view.

He regrets that no histological examination of portions removed could be carried out, but the operation is of necessity performed "piece-meal," and suitable pieces were not obtained. However, a report is quoted from Hochheim's account of similar structures, which are described as corresponding roughly to the hard palate—as, indeed, one would expect—that is to say, it consists in a piece of bone covered on one side with mucous membrane, such as is found in the nasal cavity, and on the other furnished with a lining similar to that of the naso-pharynx.

It was especially noticeable that in the two cases where the condition was double-sided the naso-pharyngeal vault was remarkably capacious and was quite normal, whilst in only two of all the cases under the author's care were any adenoid growths found. It was also noted that posterior rhinoscopy was more easily performed than is usual, which Kahler attributes to this unusual size of the space, and to the fact that the soft palate seemed comparatively insensitive; at the same time no paresis of the palate was noticed.

One of the main characteristics was an abundant accumulation of light grey tenacious mucus in the occluded nostril, and in association with this an eczematous condition of the vestibule was a most frequent occurrence; further, in one case mucous polypi were found complicating matters.

The turbinate bodies did not show any particular departure from the normal in their form or construction, though their mucous membrane at times was hypertrophied; and in no instance was any adhesion detected between them and the bony occlusion posteriorly.

Most of the patients had or had had some chronic catarrhal aural affection, otherwise nothing noteworthy was observed in this respect. The speech was of the "nasal" character in the double-sided cases, as

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one would expect, but in the remaining patients nothing peculiar was noted under this head.

Kahler enters into a long discussion on the correlation between buccal breathing, the shape of the hard palate, the capacity of the nostrils and the facial appearance. He reviews the opinions which various writers have given as to the influence of these factors on one another and the manner in which they are supposed so to act, and then proceeds to compare these theories with the actual conditions noted in his own cases, which he pertinently remarks ought of all cases of nasal impairment to bear testimony to these theories if they are correct. In the end he comes to the conclusion that there is certainly a causal relation between buccal breathing and the height of the hard palate, but beyond this he cannot find sufficient evidence as to its effect on the patency of the nostrils or the facial aspect, and considers that other developmental influences play a part in this question as well.

The apparent freedom from any discomfort under these conditions was another remarkable point, so much so that patients suffering with this affection often only apply for treatment quite late in life, and in only two of his cases would there seem to have been any trouble in nursing during infancy, but in these two instances it had, indeed, been found necessary to feed the baby with a spoon. However, even this inability did not prompt the mother to seek advice, and it was not till the child had become the butt of her schoolfellows, because she could not blow her nose, that she was brought to the clinic.

Anosmia was, however, a constant symptom, but the olfactory epithelium was unimpaired, since the patients all recovered their sense of smell immediately after the operation.

This was performed with chisel and mallet with the fore-finger introduced into the naso-pharynx as a guide and control, and for the completion of the opening the cutting forceps used to remove the anterior wall of the sphenoidal sinus were found useful. Especial stress is laid on the necessity of a prolonged after-treatment, which Kahler says often must extend over a period of many months in order to avoid the closure of the posterior nares, and on this point he thinks the entire prognosis depends. As regards the manner in which this is carried out he has sometimes used hard rubber splints, and at times rubber drainage-tubes, whilst he has also found plugging with gauze the most convenient treatment in other cases.

With respect to the ætiology of this condition, Kahler considers that any exact statement as to its mode of origin and cause must be reserved till the opportunity is afforded of making accurate examinations of specimens in the recent state, but he provisionally associates himself with the theory that it is the result of the persistance of the fœtal bucco-nasal membrane.

A reference to the literature on the subject concludes the account.

Alex. R. Tweedie.

Logan Turner, H.—*The Orbital Complications of Suppuration in the Frontal and Ethmoidal Air-Sinuses.* "Edinburgh Med. Journ.," May, 1909.

The anterior group of nasal accessory cavities lies in relation to the anterior half of the floor, inner wall, and roof of the orbit; the posterior group lies in close relation to the posterior half of the inner orbital wall, to the sphenoidal fissure and optic foramen, and sometimes also to the

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floor and roof of the orbit posteriorly. Consequently inflammatory conditions of the anterior group of cavities may be responsible for œdema and swelling of the eyelids, orbital periosteitis and sub-periosteal abscess, dacryocystitis and peri-dacryocystitis. On the other hand, retro-bulbar neuritis, optic atrophy, and paralysis of ocular muscles more frequently owe their origin to diseases of the posterior group of cavities. Infection spreads from the nose and its cavities to the orbit—(1) through congenital dehiscences in the intervening walls, (2) by caries and destruction of the walls, (3) by thrombo-phlebitis or septic thrombosis, (4) along the lymphatics. Turner gives the histories of nine cases of suppuration in the air-sinuses with orbital complications; six females and three males, of ages varying from twelve to sixty years. In seven cases the frontal sinus and in two the ethmoid cells were probably the sites of the primary infection. In six only one sinus was affected, in the rest two or more were involved. In six the onset of symptoms was acute, while in three the condition was chronic. It is interesting to note that the acute cases were young people, five being under twenty and the sixth under thirty years of age. The orbital complications may be grouped in three degrees of severity, viz. in two cases œdema of the lids, in six cases sub-periosteal abscess, in one case suppuration involving the orbital fat and muscles.

Case 1.—Female, aged seventeen. Redness and swelling of left upper eyelid of four days' duration; acute suppuration of left frontal sinus. *Operation*: Removal of left middle turbinal, simple frontal sinus operation, later radical frontal sinus operation; recovery. The pus in the sinus at first operation contained pneumococcus.

Case 2.—Male, aged seventeen. Redness and œdema of right upper and lower eyelids of four days' duration. Acute suppuration of right frontal sinus. *Operation*: simple frontal sinus operation followed later by radical operation; recovery. Pure pneumococcus.

Case 3.—Female, aged twelve. Sub-periosteal orbital abscess, œdema of eyelids, proptosis and outward displacement of eye, probably secondary to acute suppuration of left frontal sinus of two days' duration. Operation on orbital abscess: A few drops of pus evacuated; ethmoid cells and sphenoid sinus explored, no pus found there; middle turbinal removed; recovery. Diplopia on near vision when last seen.

Case 4.—Female, aged eighteen. Sub-periosteal orbital abscess, swelling and redness of eyelids of three days' duration, proptosis of eyeball and chemosis of lower part of ocular conjunctiva, probably secondary to acute suppuration of left frontal sinus. Operation on orbital abscess by incision and raising periosteum from os planum and roof of orbit; a few drops of pus evacuated; ethmoid cells explored, no pus found; recovery.

Case 5.—Male, aged twenty-five. Recurring sub-periosteal orbital abscess, probably secondary to right frontal sinus inflammation. Orbital abscess incised on three occasions; no recurrence since third opening.

Case 6.—Female, aged fourteen. Following a slight blow on the nose, swelling of left eyelids, proptosis, inflammation of conjunctiva, ulcer on cornea, blindness. An incision through upper eyelid evacuated gas and pus, in which were various micro-organisms; later a long incision was made below supra-orbital margin. The pus had invaded the orbital fat and muscles, and had destroyed the lacrimal bone and os planum. The left middle turbinal was removed and the ethmoid cells destroyed. The condition improved; then erysipelas set in, but passed off in a few days; later the patient became comatose and died. *Post-mortem*: Pus was found in the left frontal, ethmoid, and sphenoid sinuses; a small

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perforation in the roof of the left orbit communicated with an abscess in left frontal lobe. An extensive suppurative basal meningitis extended over the interpeduncular space, pons Varolii and medulla, and lower surface of each lateral lobe of cerebellum. There was pus in the left cavernous sinus.

The following three were cases of chronic nasal suppuration:

CASE 7.—Male, aged thirty-four. Sub-periosteal orbital abscess, no swelling of lids, no proptosis, but a small swelling at inner end of left upper lid, into which a probe could be passed through a fistula. Large left middle turbinal, pus in middle meatus. Operation revealed destruction of part of lacrimal bone and os planum. The middle turbinal was removed and the ethmoid cells broken down; recovery in a few weeks.

CASE 8.—Female, aged forty-eight. Epiphora for two years; for some months swelling of left upper eyelid, forward, downward, and outward displacement of eyeball; small sinus just below centre of left supra-orbital margin, discharging thick greenish pus; diplopia. At the operation a hole was found in the floor of the left frontal sinus; pus was found in frontal sinus, anterior ethmoid cells, and antrum; the frontal sinus was obliterated, the cells broken down, and the antrum opened through alveolus; recovery. A pure culture of *Streptococcus brevis* was made from the pus from frontal sinus.

CASE 9.—Female, aged sixty. Swelling of left upper eyelid began eighteen month before admission, remained constant for about a year, then began to increase, and pains began to occur in left eye; about two months later had an attack of influenza, during which she noticed discharge from *right* nostril. The amount of swelling varied; no headache; eyesight not interfered with; no epiphora; no diplopia. On admission left upper eyelid red and œdematous, and a tense swelling occupied middle and inner thirds of upper eyelid. Left side of nose normal; pus in right middle meatus; right middle turbinal œdematous. At the operation it was found that the whole floor of the left frontal sinus had been absorbed, the sinus was full of pus; no ostium frontale could be found, but there was a perforation of the interfrontal septum. At the operation, therefore, the left frontal sinus was obliterated without any attempt being made to open down into the left side of nose. The right frontal sinus was also obliterated, a large free opening being made into right side of nose;. recovery.

In the pus were found *Bacillus mesentericus*, *Micrococcus catarrhalis*, *Staphylococcus pyogenes albus*, bacillus of Hoffman, and a bacillus not identified.

These nine cases occurred in the author's practice during seven years, and form 7 per cent. of the cases of acute and chronic frontal and ethmoidal suppuration coming under his observation in the same time.

Arthur J. Hutchison.

LARYNX.

Sargnon (Lyons).—*Direct Endoscopy, especially in its Application to Laryngology.* "Archives Intern. de Laryngol.," 1908–1909.

In this work the author studies the result of his experience in regard to—

(1) The respiratory passages;
(2) The digestive passages;
(3) The other orifices of the organism.

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