ASSOCIATION MEETINGS.

AMERICAN MEDICAL ASSOCIATION, DETROIT, U.S.A.

June, 1892.

Section of LARYNGOLOGY and OTOLOGY.

CHARLES A. BURNETT, Philadelphia, *Chairman.*
A. B. THRASHER, Cincinnati, *Secretary.*

The Medical Treatment of Acute Tonsillitis and Pharyngitis; a comparative study, based on one hundred and sixty-nine cases. By Dr. JAMES E. NEWCOMB, New York.

Reference is had only to the catarrhal forms, and to quinsy. The cases are divided into three groups, as follows:—

1. Cases in which treatment was begun on the first or second day of the disease.
2. Cases where it was begun on the third day.
3. Cases where it was begun after the third day.

The standard by which the effect of remedies was judged was the number of hours in which the painful swallowing characteristic of the disease was relieved. Three remedies were used, salol, guaiac, and salicylate of soda.

The results of treatment may be summed up as follows:—

Salol cases—
Group 1.—36 cases, average relief in 12 hours.
Group 2.—15 cases, average relief in 14 hours.
Group 3.—30 cases, average relief in 18 hours.

Guaiac cases—
Group 1.—20 cases, average relief in 18 hours.
Group 2.—10 cases, average relief in 23½ hours.
Group 3.—14 cases, average relief in 11 hours.

Sodium salicylate cases—
Group 1.—15 cases, average relief in 24 hours.
Group 2.—12 cases, average relief in 17 hours.
Group 3.—17 cases, average relief in 15 hours.

i.e., 81, or 48 per cent. healed by salol, averaged ... 14⅓ hours.
44, or 26 per cent. healed by guaiac, averaged ... 17⅓ hours.
44, or 46 per cent. healed by sod. salicylate, averaged 18½ hours.

The preference is therefore in favour of salol. The dose employed was five grains every two hours.

In regard to the rheumatic aspect of throat diseases, a study of these cases shows that 47, or 29 per cent., had either rheumatic fever, joint

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pains, or rheumatic parents. One hundred and fifteen, or 71 per cent., were entirely free therefrom. The former were relieved by the remedies employed in an average of 16½ hours, while the average in the latter was 17⅓ hours, practically the same.

The writer believes that salol will relieve the conditions mentioned quicker than any other remedy, if there is much peritonsillar enlargement. He believes in an incision toward the median line, whether there is evidence of pus or not. It frequently gives great relief. Where pus is present free incision, followed by a hot bicarbonate of soda gargle, give satisfactory results. In all cases a thorough evacuation of the bowels should precede other remedies. This is particularly necessary with salol, which in the alkaline duodenum needs contact with the pancreatic juice to split up and set free its component parts. The urine in patients taking salol is generally darkened, but that need cause no alarm. No poisonous symptoms have been observed, and only occasional tinnitus.

Tuberculosis of the Pharynx. By Dr. J. E. BOYLAN, of Cincinnati.

The patient, a lady, married, twenty-five years of age, six months pregnant, had been sent to a southern climate because of a chronic catarrhal throat affection of two years' standing, and a more recent irritating cough. After six months' absence, believing her health entirely restored, she returned. During the ensuing six weeks there developed a very painful condition of the throat, which had grown rapidly worse, so that at the time of presentation she suffered intensely at every attempt to swallow. Her appetite until shortly before this had been good; she had no cough, did not sweat at night. The patient was fairly nourished; there was noticeable enlargement of the cervical glands. Physical examination showed a shorter and duller percussion note over the left apex than over the right, and a somewhat roughened expiration; beyond this nothing abnormal. Upon examining the pharynx, general pallor of the hard top was noticeable at a glance, which comprised the whole of the left side of the roof of the mouth, while on the right side it gradually merged into an abnormal redness, and then into a severe infiltration, which remained sharply defined from the pale right side at the median line, and which involved the uvula, the anterior and posterior pillars, the tonsil and the right side of the posterior pharyngeal wall. Upon the right anterior pillar there was an oblong shallow ulceration with irregular outline, and at the back of the tongue, near the right glosso-epiglottic fold, a similar one. In the neighbourhood of the first ulceration, and in various other parts of the field of infiltration, a number of yellowish white and greyish white specks were to be seen in places distinctly isolated, in others merging into indistinct whitish patches. Laryngoscopic examination showed the epiglottis and arytenoids somewhat anæmic; the larynx otherwise normal. Notwithstanding the inactivity of the disease in the lungs the patient's friends were informed that a rapid and fatal termination was to be expected. The condition was perceptibly improved at first by insufflations by iodoform and morphine, and very considerable relief afforded; the patient soon sank, however, into a condition of exhaustion, and succumbed to the disease ten days after giving

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birth to her child, and within four months from the time that the disease first made itself felt in the pharynx.

A Case of Abductor Paralysis of both Vocal Cords. By JONATHAN WRIGHT, M.D.

The report of a case in which there was immobility of the left vocal cord in the median line, with inability of the right vocal cord to move more than one-eighth of an inch from its fellow. Attacks of displencea occurred from time to time, in one of which the patient finally died, presumably from the failure of abduction on the part of the right vocal cords, which, with the permanent abduction of the left cord, closed the glottis.

The author does not pretend to say whether this phenomenon was due to a paralysis of the abductors primarily, or to laryngeal spasm from pressure (Krause's theory) of a cervical vertebra on the left vagus nerve, above the origin of the recurrent or upon the recurrent itself. There was curvature of the spine in the cervical region with convexity to the left. Experiments have proved that irritation of the vagus, or of the recurrent nerve, may not only cause a paralysis or spasm upon the side affected, but by reflex action through the medulla also of the opposite side.

The author quotes the experiments of Dionisio as shaking his belief in Krause's theory of spasm from the irritation of pressure.

He suggests the extirpation of the vocal cords in these cases of double posterior paralysis in order to avoid the continued use of a tracheotomy or intubation tube.

He suggests that, in the case of bilateral closure of the glottis lately reported by Ruault in the "Arch. Internat. de Laryngologie," No. 1, 1892, the operation of dividing one recurrent nerve, in order to cause cadaveric position of one vocal cord, was unsuccessful because contraction of the posticus muscles had taken place, with permanent contraction of the adductors, and probably fixation of the crico-arytenoid joint.

A Case of the so-called Bezold Variety of Mastoiditis. Opening of mastoid; craniotomy; death; autopsy; abscesses in temporal lobes and cerebellum; thrombo-phlebitis on the other side. Reported by Dr. H. KNAPP, New York.

A young woman had repeated attacks of coryza, with earache for a year. September 28, 1891—Acute otitis catarrhalis on both sides, recovery on the left, aggravations and remission on the right; mastoid tender, swelling of head of sterno-cleido-mastoid muscle incised, pus escaped; relief; meningitic irritation for two weeks; then chiselling away the outer table of the mastoid, pus from base to tip; relief four weeks; no discharge from mastoid—there never had been any from the ear. Cerebral symptoms marked, viz., persistent headache, nausea, occasional vomiting, dizziness, stupor, impediment of speech, loss of appetite, constipation; pulse varied from 72 to 88, later sank to 60; temperature, 98 4·10, 101, never higher, never rapidly changing; no deliria, chills, convulsions, or abnormity of sensation; no trouble from ear, upper part of drum-head bulging. In February, 1892, two months before her death,

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sudden hard swelling at medial side of other left sterno-mastoid muscle. Optic neuritis developed a month before death. Left ear and mastoid healthy, hearing good; craniotomy advised, but refused until one day before death; operation—opening in mastoid enlarged and extended into the posterior fossa, three millimètres by two millimètres large; no pus; chiselling posterior wall of ear canal and enlarging mastoid antrum until probe passes freely into attic of tympanum; soft tissue felt; no caries, no pus; hole of two millimètres in diameter chiselled into middle cranial fossa; no pus between dura and bone; dura and superficial layers of bone incised, found healthy. Patient, who for the last half hour had to be sustained by subcutaneous injections of alcohol and artificial respiration, given up as hopeless; she rallied, however, breathed well, had good colour for three-quarters of an hour, then suddenly collapsed. Autopsy—A perforation in the medial wall of tip of mastoid one millimètre in diameter, verifying diagnosis of a Bezold mastoiditis; tympanic attic densely filled with granulation tissue, no pus; right lateral sinus filled with clotted blood; dura healthy; pia on temporal lobe and right side of cerebellum milky, small veins filled with pus; sinus around torcular, the left lateral sinus, and the left internal jugular, as far as the swelling observed during life filled with pus. Abscess in depth of temporal lobe, another in right hemisphere of cerebellum, both opposite the perforations made by the craniotomy; remainder of brain, in particular the ventricles, healthy. The case, with remarks on the significance of the subjective and objective symptoms of otitic brain disease, will appear in abstract in the Journal of the American Medical Association, and in full in the third number of the "Archives of Otology," Vol. 1892.

Naso-Pharyngeal Lesions due to Lateral Vaso-Motor Causes. By RALPH W. SEISS, M.D., Philadelphia.

Considers nervous coryza, including some types of obstructive enlargement of the turbinated tissues, recurrent enlargement of the lateral pharyngeal walls, not dependent on inflammatory causes and various forms of pharyngeal and laryngeal varix. All the conditions are regarded as angio-neuroses, and believed to be due to a mal-condition of the vaso-motor centre in the medulla, or to truly cerebral causes. Nervous coryza may be due to mental causes, as anxiety, etc., and occurs in neurotic subjects with irritable hearts. Is associated with marked general vaso-motor neurosis, as tachycardia. Profuse perspiration, sensation of numbness, and cold extremities. Inspection shows intermittent distension of the venous sinuses, with but slight redness, or other inflammatory change.

Angio-neuroses of the pharynx may occur with rhinitis sympathetica, or of lingual varix, or may be found alone. An attack may come on suddenly, following overwork, or may become chronic. The local symptoms are fatigue and weakness, and constitutionally the evidences of low nerve and blood-vessel tone. On inspection vascular relaxation and varicose vessels are found. Varix of the lingual tissue is believed to be associated with grave central lesions in many cases. Local symptoms may include serious paroxysmal dyspnœa, and various forms of parathesia.

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Three cases of typical angio-neuroses are reported, in which the treatment consisted largely of tonics and rest with gratifying results.

In addition to the typical neuroses central causes are believed to have an important bearing on many diseases of the naso-pharynx, the writer regarding the "catarrhal tendency" and "neurasthenia" as practically synonymous. The results of persistent vascular distension from central causes are increased, vulnerability of the area affected, hypertrophy of the tissues, and blood changes; the characteristic changes in chronic rhino-pharyngitis can therefore all be accounted for in cases of central origin. Treatment is discussed in some detail, and the immunity of the domestic animals from chronic rhino-laryngitis is believed to be due to the non-neurotic and well-controlled vaso-motor centres. The most useful therapeutic measures are climatic changes, rest, exercise, regulated bathing, massage and faradism. Strychnine, bromides, and digitalis are occasionally indicated. Local treatment is regarded as of value, and may act by transmitting favourable influences through the medulla, as is well known to be the case with irritants. Ill-timed operations and irritative treatment may in some way aggravate the central neurosis, as well as the local disease. A case of undoubted central origin is reported in which an amount of vascular tissue, equalling the little finger in bulk, was removed from the turbinated bodies owing to the rapid recurrence of swelling during a year's treatment. Benzoate of sodium, menthol, and the volatile oils of cinnamon and sassafras, thymol and camphor, are mentioned as of especial value when locally applied.

At present scientific treatment of naso-pharyngeal angio-neuroses would seem to include all measures recognized as general or local nerve tonics, and to seriously debar all irritants, depressants, and abnormal vaso-motor excitements.

Some observations upon Excision of the Membrana Tympani, and the Two Largest Auditory Ossicles. By Dr. C. H. BURNETT, Philadelphia.

1. The deafness, tinnitus and vertigo of chronic catarrhal otitis media, especially when adhesions exist between the membrana tympani and the promontory in the tympanic wall, or when there is evidence of synechiæ between the ossicles.

2. This operation is indicated in the suppuration, deafness, tinnitus, vertigo, headache and recurring earache of otitis media purulenta chronica.

Conclusions regarding the results of the operation in cases of chronic catarrhal otitis media were presented as follows:

1. The operation of excision is attended with no bad results even if it do no good, and its effects are superior to "massage," "mobilization," "plicotomy," etc., etc., applied to the membrane and the ossicles.

2. The most constant result of the operation is a relief from a sensation of pressure and fulness in the ear.

3. There is generally a more or less prompt, entire, and permanent relief of tinnitus and aural vertigo (so-called Ménière's symptoms).

4. The least frequent and permanent result is improvement in hearing. Sometimes, however, this is marked. In some instances the improvement in hearing is maintained after regeneration of the membrana tympani.

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5. In those cases of chronic catarrh of the middle ear in which everything else has been tried without benefit, it would seem rational that the patient should have the chances of improvement offered by this harmless operation; for harmless it certainly has been in all his cases, even if the benefit has been only slight.

Conclusions regarding the results of the operation of excision of the membrana tympani and the two large ossicles in chronic purulent otitis media.

1. The operation has not failed either to greatly diminish or check the suppuration in all the cases of chronic otorrhoea in which the writer has applied it.

2. In attic cases with normal atrium, the sole perforation being in the membrana tympani, the operation has shown itself to be the only sure means of cure. He would add that in attic cases, with diseased atrium and with perforations in the membrana flaccida and membrana tensa, this operation has also effected a radical cure after the disease had defied for years all other remedies.

3. By this operation in chronic purulent otitis media, especially in cases in which the perforation in the membrana tensa is comparatively small, and while the disease is limited to the drum cavity, the suppuration can be directly reached and treated, and drainage improved by the removal of the membrana tympani and malleus, before the purulent disease has attacked the posterior portion of the drum cavities and the atrium. The mastoid inflammation and necrosis sinus thrombosis, pyæmia and cerebral abscess are prevented.

4. If any hearing exists before the operation in purulent cases, it invariably improves after the excision of the necrotic membrane and the ossicles.

5. Vertigo, headache, tinnitus, and the attacks of earache from gatherings, so common in chronic otorrhœa, are entirely and permanently removed. The general health, which is nearly always impaired in these cases by a form of mild chronic septicæmia, from the chronic purulency in the ear, is always improved by the antiseptic effects of the operation, which removes the septic nidus, and makes it possible to render the drum-cavity entirely aseptic by the improved drainage and direct medication.

Dr. Burnett has seen no reason for changing any of these conclusions; on the contrary, he is more firmly convinced of the great benefits, especially in chronic purulent cases, to be derived from the operation of excision of the necrotic membrane, and the diseased malleus and incus. The latter outlet, however, is readily destroyed by purulency in drum-cavity, and hence in chronic cases is rarely found when the operation is performed.

Synopsis of article on Excision of the Membrana Tympani and the two Larger Auditory Ossicles, as a Means of Treatment in Chronic Catarrh of the Middle Ear and in Chronic Purulent Otorrhœa. By Dr. CHARLES H. BURNETT.

Indications—

1. Deafness, tinnitus, and vertigo occurring in otitis media catarrhalis chronica.

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2. Suppuration, deafness, tinnitus, vertigo, and other sequelæ of otitis media purulenta chronica.

Rationale—

1. Permanent perforations may improve the hearing. Removal of the malleus and incus unloads the stapes and relieves tinnitus and vertigo.

2. In otitis media purulenta chronica exsection of necrotic tissue improves drainage, facilitates treatment of diseased tympanic cavity and stops suppuration, and prevents its serious sequelæ when unchecked. The removal of mechanical obstructions, and checking of suppuration unloads the stapes, improves the hearing, and stops the tinnitus and vertigo.

Dr. Burnett next considered the organization and technique of the operation. He performs it with the patient under ether, and he employs electric light, using for this purpose a six volt three candle power incandescent lamp, held on the forehead by a head band, and near by a portable six volt storage battery. (Weight 11 lbs. 6 oz.)

Conclusions—

In the otitis catarrhalis chronica.

1. This operation is attended with no bad results even when it does no good.

2. The most constant result of the operation is a relief of a sense of fulness or pressure in the ear.

3. The next most constant result is the prompt, and the permanent removal of tinnitus aurium and aural vertigo (so-called Ménière's disease).

4. The least frequent result is improvement in hearing—sometimes, however, this is marked and permanent.

In otitis media purulenta chronica.

1. This operation has not failed to stop suppuration in all the cases of chronic purulent otitis media in which the writer has applied it.

2. In "attic" cases, with normal atrium, the sole perforation being in the membrana flaccida, this operation is the only means of cure.

3. By this operation, in cases of chronic purulent otitis media, in which the sole perforation is in the membrana tensa, and is comparatively small, and while the purulency is limited to the anterior part of the drum-cavity, the suppuration is checked before it attacks the posterior portion of the drum-cavity, and mastoid inflammation and necrosis, sinus thrombosis and cerebral abscess are thus prevented.

4. If any hearing exists before the operation, it invariably improves after the operation.

5. Vertigo, headache, tinnitus, and the ordinary attacks of acute inflammations, or "gatherings," so common in chronic otorrhœa, are entirely removed by the operation of excision of the necrotic remnants of the membrana tympani, malleus and incus.

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Report of four hundred cases of Intubation of the Larynx. By Dr. F. E. WAXHAM.

Under 1 year —12 cases	with	4	recoveries, or	33⅓	per cent.
At 1 year —52	,,	12	,,	23·07	,,
At 2 years—70	,,	18	,,	26·71	,,
At 3 years—69	,,	27	,,	39·10	,,
At 4 years—79	,,	30	,,	37·97	,,
At 5 years—39	,,	18	,,	46·15	,,
At 6 years—25	,,	7	,,	28	,,
At 7 years—25	,,	10	,,	40	,,
At 8 years—10	,,	6	,,	60	,,
At 9 years— 6	,,	3	,,	50	,,
At 10 years— 5	,,	2	,,	40	,,
At 11 years— 1	,,	1	,,	100	,,
At 12 years— 2	,,	0			
At 13 years— 1	,,	0			
At 14 years— 1	,,	0			
At 20 years— 1	,,	0			
At 43 years— 1	,,	1	,,	100	,,
At 60 years— 1	,,	0			
400		139		34·75	,,

A case of Papilloma of the Larynx: an intubation tube worn four years. By Dr. WAXHAM.

The case is unique on account of the complications, the length of time the tube was worn, and the almost perfect comfort of the patient. The patient suffered from an attack of measles at the age of one and a half years, during which time the cough was croupy, and respiration somewhat embarrassed, but these symptoms soon subsided. Six months later the voice became husky, and finally suppressed entirely. The respiration was difficult for two months, and the dyspnœa gradually increasing. The patient was seen by several physicians, including the late H. A. Johnson, who diagnosed laryngeal obstruction, due to papilloma. The symptoms gradually increased until the child was two and a half years old, when they were so alarming as to threaten immediate suffocation. Intubation of the larynx was performed, in the hope that the introduction of the tube and subsequent pressure might destroy the growth. The operation gave immediate relief, and the tube was worn one week without any inconvenience. The tube was then removed, and not replaced for two weeks, when the symptoms again became urgent, and it was reintroduced. In a few days it was again removed, but the patient could not breathe without it, and it became necessary to at once replace it. It was evident that the simple pressure of the tube was not sufficient to destroy the growth. Discolouration of the upper and anterior portion of the tube indicated the location of the growth. It was decided to destroy the papilloma by cauterization. This was done by first coating the upper and anterior portion of the tube with collodion; then chromic acid was applied, and then another coating of collodion; the tube thus prepared

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was introduced, and left in position for a few days. Upon its removal, as the respiration was very difficult, another application was made in a like manner. On account of an absence of several months in Europe, the patient was left in care of another physician, who performed tracheotomy on account of the difficulty experienced in removing the tube. On returning to the patient several months later, he was found wearing a tracheotomy tube instead of the intubation tube, and the larynx firmly sealed by adhesions resulting from the cauterization. The finest probe could not be passed through the larynx. Laryngotomy was performed, the adhesions broken up and cut away as far as possible, and the remnants of the papilloma removed; the cartilages of the larynx were united by means of silver wire sutures, and a small intubation tube left in the larynx to prevent adhesions, the tracheotomy tube being allowed to remain undisturbed. After the wound had healed, the small intubation tube was removed, and a larger one, shortened so as to be worn above the tracheotomy tube, introduced. The patient, strangely enough, could not breathe through the larynx with the tracheotomy wound closed, either with or without intubation tubes. There was a constant tendency to the return of the growth above the head of the intubation tube, which was as frequently removed by means of a curette. Larger and larger intubation tubes were used, until, at the end of two years, the patient was able to dispense with the tracheotomy tube. For two years the patient has been wearing the intubation tube alone. It has been necessary to change the intubation tube on an average of once a month, and to occasionally alter the shape of the head, so as to bring the pressure at different points. The patient is now able to breathe without the tube for several hours at a time, and presents every appearance of health.

Mental Aberration attending Hypertrophic Rhinitis with Subacute Otitis Media. By Dr. J. G. CARPENTER, Stanford, Kentucky.

Mr. H., age about forty years, farmer, family history good, general health excellent, excepting the affection in upper air passages. Though he has been a hard worker and able to transact business, his health the last year or two has been greatly impaired; he felt languid, indifferent, tired, that he is losing interest in business, has nasal stenosis, mouth breather, and has an oppressed full sensation in the naso-orbital regions, constant headache, greatly aggravated by colds, sudden changes in weather, and hot sun, dislikes to be in company, seeks solitude, is melancholic, irritable, peevish, morose, has an indifferent, stolid, and insane expression, has constant pains in various regions of body, at times increased in severity. In the spring of 1891 his symptoms for work were increasing; he sought no professional advice, but tried to work or wear off his indisposition. He went to the field to plough, had a violent headache, stopped ploughing for a while and lay down on the ground. From this time has no recollection of what transpired; for days he failed to come home; left horse in the plough. Family and neighbours instituted a search, but Mr. H. could not be found. A nephew was in the city of Lexington, Kentucky, and saw Mr. H. in the street in his shirt sleeves and old working clothes. Mr. H. could give no account of himself, did

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not know where he was, or when or how he came to that city, nor on what business. Said he had a bad headache and lay down in the field, and was aimlessly wandering over the city, speaking to no one and like the wandering Jew finding no rest, but continually passing on, virtually was lost to himself and family and friends and surroundings. His nephew brought him home. He does not sleep well, appetite capricious, is very weak, nervous; says his head (forehead) and left half of head hurts terribly bad, that the left half of head throbs all the time. A rhinoscopic examination reveals a naso-pharyngitis, hypertrophy of the lower and middle turbinated bodies, nasal stenosis, the post naso and vault of pharynx is of a purplish red and swollen, angry appearance, coated with thick tenacious inspissated mucus, great tumefaction. The left side of head is sensitive to touch. The drum-head is bulging and highly congested. Paracentesis is resorted to; the throbbing, pain, and sensitiveness rapidly subside. The naso-pharyngeal chambers are sprayed and cleansed with a mild antiseptic wash, and daily medicated for a week with mild, soothing, astringent, non-irritant remedies.

The congestion and inflammation reduced to a minimum. Now the turbinates are cocained and cauterized, and the nasal stenosis relieved in seventy-two hours; from latter treatment the mental faculties begin to clear up, the clouds gradually pass away, patient is sprayed for three weeks with mild astringent, antiseptic and aseptic soothing remedies, and in a month is cured of all mental aberration. The nasal stenosis and enlarged turbinates have been removed, and the lining of the naso-pharyngeal chambers placed in a healthy state; patient is restored to former health.

Infectious Pseudo-membranous Follicular Tonsillitis and Pharyngitis. By Dr. CASSELBERRY, Chicago.

The fact that in tonsillar affections diphtheria can only be excluded positively by the absence of the Klebs-Loeffler bacillus should not engender neglect of macroscopic signs and clinical symptoms, upon which a differential diagnosis may also be made, usually with greater promptness and with reasonable certainty.

Furthermore, concerning the various forms of follicular tonsillitis and pharyngitis, in the absence of more definite bacteriological results we must still rely upon the clinical aspect to distinguish one kind from another.

One can certainly distinguish at least two types of acute follicular tonsillitis which may be named in contradistinction to each other.

1. Simple follicular tonsillitis, and (2) infectious pseudo-membranous tonsillitis.

With the simple form there may or may not have been previous chronic hypertrophy or inflammation; it is conditional, if not caused by taking cold, *i.e.*, by refrigeration of some part of the body surface, which determines vascular engorgement of the tonsils, exactly as with another individual it may occasion vascular engorgement of the nasal turbinated bodies. The tonsil swells, the follicular openings are obliterated and the pent up secretion acts as a further irritant; it becomes inspissated, and mixed with epithelial *débris;* it is soon forced out to the surface of the gland in the

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form of cheesy pellets which may simulate a punctated pseudo-membranous exudate, but which is really not such ; it is without evidence of primary parasitic infection as a cause, and it is not, therefore, contagious, but it is capable of being transposed into a conglomerate variety of tonsillitis by secondary infection with pathogenic micro-organisms. It is not usually preceded by a distinct chill, and it is not accompanied by much fever or systemic depression, and, finally, when the tonsils are free of this accumulated *débris*, or at times earlier if the globules are forcibly dislodged and removed, this simple tonsillitis rapidly subsides.

2. Infectious pseudo-membranous tonsillitis, on the other hand, is characterized by deep congestion, but often only by moderate swelling of the tonsil, and by a punctated exudate of pseudo-membrane the spots of which are in size from two to four millimètres in diameter and are attached around the follicular openings, presenting the appearance as if the crypts within were also lined with the same material. Unlike the "cheese" pellet, the exudate is thin and translucent, and so intimately connected to the underlying mucosa that it cannot be detached without bleeding or without force. Two or more puncta may join at their borders and form larger spots, but after cleaning away all muco-purulent matter this punctated conformation of even the larger pseudo-membranous areas may readily be discerned. In addition to the tonsils any or all of the muco-lymphoid glands in the pharynx may be likewise affected, especially the chain of glands located just behind the tonsil and separated from it by the posterior pillar, but the pseudo-membranous exudate is limited absolutely to the glandular structures of the pharynx, although careful cleansing and critical inspection will be required to demonstrate this fact. It is often ushered in by a chill and is accompanied by moderate or even high fever. The cause is infection by any one of several species of pathogenic micro-organisms, *e.g.*, streptococcus erysipelatosus, staphylococcus pyogenes, etc.

The Klebs-Loeffler bacillus of true diphtheria is not found in this disease, as reported by Sendtner, Barnabee, Dubler, Rendee and Hajek, each of whom, however, has found in abundance some one of the other microbes above mentioned.

A case is related embodying distinctively the foregoing data. By attention to these details it is, moreover, believed that this form of tonsillitis and pharyngitis, with but very few exceptions, may be readily distinguished clinically from the true diphtheria, which is characterized, not by the thin, translucent, punctated exudate, but by thickish, opaque, diffuse plaques of pseudo-membrane, which are not limited to the glandular structures, but which when originating on the tonsil rapidly embrace as well the pillar of the fauces and extend to or involve the pharyngeal wall and velum palati.

Mastoid Trephining, with thirty-two cases operated on among some 3400 new ear patients of 1889 to 1891. By Dr. RANDALL, Philadelphia.

The author called attention to the growing tendency to operative treatment in otology as in other fields of practice, and to the increased necessity for intervention, especially for mastoid empyema or caries,

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since the epidemics of influenza. Even those disinclined to intervene thus are likely to find, as he had done, that the need was increasingly forced upon them. Among some 3400 new patients for this last triennium of work, there had been upwards of one hundred mastoid inflammations; and while many were brought to resolution, there were thirty-two operations upon the bone, as well as others where operation was refused, or could be carried out from within the canal. Pus was present in every one of these cases, and in only one was the exterior of the mastoid intact. This last was one of the two cases which terminated fatally, and the only one in which the operation could have contributed to the fatal issue.

He concludes that operation is not always necessary, unless pus is present; that pus should always be evacuated; and it should be sought within the bone in all suspicious cases. Ether is generally needed in order to permit of thorough exploration, as it is impossible to determine in advance the exact condition to be found.

All diseased tissue possible should be removed at once, and the minimum of dressing or irrigation left for the after-treatment.

Hypertrophy of the Anterior Extremity of the Middle Turbinate Body of the Nose. By Dr. G. V. WOOLEN, Indianapolis, Indiana.

This condition the author finds exceedingly common. Not the "necrosing ethmoiditis" of Woakes, but simply an overgrowth of tissue at the anterior tip. This, from not greatly obstructing the breathing canal, often passes unnoticed.

But by catching the nasal nerve between itself and the septum, which it must do unless the space in that part of the nose be unusually large, the hypertrophied tip produces pressure irritation, and by occluding the orifice of the ethmoidal and frontal sinuses defective drainage, the two prominent evils of catarrh in this and other regions as claimed by Lefferts. The pressure irritation of the nasal nerve is reflected back over the other branches of the fifth, and together with the defective drainage causes headache, unilateral or bilateral, as the pressure is on one or both sides, deep orbital pain, mental hebetude with defective memory, melancholia, and even epilepsy.

As these neuralgias of the fifth nerve are not common in children before the turbinates have become much hypertrophic, and as shrinking with a dry atmosphere or cocaine brings temporary, and their removal permanent relief, the conclusion is that the turbinate tip is the cause of the trouble. The removal of it is easily effected by the snare.

An Improved Galvano-Cautery Snare; its Use in the Nose and Throat. By Dr. HANAU W. LOEB, St. Louis, Mo.

After commenting upon the necessity of great improvement in the galvano-cautery snares now in vogue, and after stating the shortcomings of such instruments, the writer presented his own snare as one which could be kept clean under all circumstances.

In this instrument the insulating material is rubber, which can be easily removed from the canulæ, while in the older instruments a covering of thread or silk which, once soiled, is always unclean, constitutes the

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insulation. The canulæ themselves are also easily removable, and hence are just as readily cleansed.

To obviate the great length of platinum wire which all other snares necessitate, the writer has added a little device, which consists in passing two stout copper wires through the canulæ. Each wire contains a little eyelet in its flattened end, through which the platinum wire is inserted, and the ends bent so that when the wire is pulled into the canulæ it cannot escape. There is less inconvenience in threading the little eyelet than in passing the wire through the old canulæ. An ivory tip, similar to those already in use, completes the instrument.

The snare is applicable to the slide handle made by the McIntosh Battery and Optical Co., from whom as well as from A. S. Aloe and Co., St. Louis, Mo., the snare may be procured.

The following are the advantages of the instrument—

1. Cleanliness. Every portion is removable, the rubber insulator, the two canulæ, the two copper wires, the platinum wire, and the ivory tip ; it is therefore easy to treat them as is ordinarily done with all surgical instruments.

2. Less expense. The platinum wire is not so frequently broken, and when it is, it may be replaced at a trifling cost.

3. The instrument is firmer, and therefore more easy of manipulation.

4. The current required is undoubtedly less.

5. There is no danger of short-circuiting the current.

As to the range of application of his snare, Dr. Loeb stated that in the removal of tonsils it was specially of service. Tonsils in all conditions of hypertrophy, except when thoroughly impacted between the pillars of the palate (even then a small portion may be removed), are excised with more precision and with less danger or inconvenience than by any other method, while pain and the time required are not increased. The tonsil is drawn out from between the palatal pillars by means of forceps, and the snare is engaged so that as much of the tonsil is removed as is desired or desirable. Ear-pain and inflammatory reactions are no greater than after the tonsillotome operation.

To remove the uvula the snare is pleasing. The uvula is allowed to drop into the loop, the wire drawn tight, the current turned on, and the uvula removed, no forceps being necessary. Less pain follows this operation than that with the scissors or uvulotome, apparently because the forceps or forks of the uvulotome draw down the mucous membrane, so that more of the mucous membrane is cut away than of the muscular tissue, whereby a considerable portion of the latter remains exposed, making an exquisitely painful stump.

In the nose the snare is indicated wherever the old forms could be used, for the removal of polypi, portions of mucous membrane, and of the turbinated bones.

The writer also stated that he had his cautery points covered with rubber instead of with thread, by which is overcome the objectionable lack of cleanliness.

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The article concluded by the observation, *Quod erat demonstrandum*, his comment upon the following communication received from the McIntosh Battery and Optical Company :—

"The snare is certainly possessed of advantages over the ordinary "forms, notably among which are greater ease with which it can be "cleaned, economy in platinum wire, and less ampèrage required in "heating. This latter feature showed very plainly when testing yester-"day and to-day a new device for the use of the Edison current in "galvano-cautery. Twenty ampères of current could not satisfactorily "heat the ordinary form of snare ; ten to fifteen brought your snare to the "proper heat."

Diseases of the Naso-Pharyngeal Portion of the Respiratory Tract. Their Relation to, and Ulterior Effects upon the General Health. By Dr. P. C. Jenson, Manistee, Mich.

It is an experience of most frequent occurrence to observe the effects of sudden changes of temperature upon the human organism. Fluctuations of temperature and humidity, with their concomitant barometric variations, are factors which cause an inequality of the circulation, and thus the naso-pharyngeal portion of the respiratory tract suffers from blood stasis, induced by this irregular circulation, which constitutes the first step in taking cold. The sudden alteration of heat and cold, and the transition from dry to a humid atmosphere, are very influential in the production of colds. Of other important etiological conditions may be mentioned debilitating influences, excitement, previous and present disease, heredity, temperament, occupation, also mechanical influences, chemical influence, mental emotions, defective sanitation, imperfect digestion, etc.

He is disposed to believe that chronic affections are the result of repeated colds or attacks of acute inflammation, and that they in turn predispose to the acute troubles. In the majority of cases the result is an acute inflammation of the mucous membrane which lines the nasal passage. In others it gives rise to pharyngitis and tonsillitis, and other forms of disease.

Persons whose business necessitates the endurance of alternate hot and cold, or the exposure to dust and irritating gases, are rendered especially susceptible to rhinitis and naso-pharyngitis.

The frequent association of such nasal diseases suggests causal relation. Intra-nasal diseases are frequently the cause of a series of secondary affections. These secondary diseases may occur from direct irritation, or from reflex action. From the former cause may be mentioned Eustachian catarrh, otitis media, pharyngitis, tonsillitis, laryngitis, bronchitis, etc.; while to the latter may be attributed the so-called sensory motor, as nasal or bronchitic asthma, sneezing, hay fever, epiphora, etc. The symptomatology of intra-nasal disease will depend upon the form of disease present. As in polypus, we have the symptoms of obstruction, as interference of nasal respiration, frontal headache, intra-nasal pressure, snoring, pharyngeal and laryngeal irritation. The direction in which the secondary disease may extend will be largely

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dependent upon conditions, such as inheritance, dyscrasia, peculiarities, predisposition, temperament, occupation, etc. Repeated attacks of colds, extending over a period of years, will in most individuals establish a condition commonly known as catarrh. The excessive formation of mucus gravitating and trickling down from the post-nasal space into the pharynx, there to be swallowed along with food and drink, will soon cause pathological fermentation of the gastric contents, this finally causing a chronic gastritis and developing intestinal disorders. And not only will the system in general suffer the effects of inanition, but additional depression and exhaustion is superinduced by contamination of the blood with mucoid poison. Leucomaines, pepto-toxines, and the products of bacterial and pathological action, the consequence of these morbid derangements, may eventuate in any of the following conditions, viz. :—anæmia, chlorosis, leucocythæmia, copræmia, neurasthenia, neuralgia, rheumatism, abscesses, furuncles, carbuncles, eczema, etc.; and if a latent strumous or tuberculous habit exists, it may be speedily aroused into energetic morbid action.

Of the effects which further exhaust the system and complicate pre-existing conditions, obstructive nasal abnormalities are seriously instrumental in the development of inflammation of the mucous membrane of the larynx, tracheal and bronchial tubes by reason of failure in elevating the temperature of the inspiratory current of air to that of the blood, and further by insufficiently moistening the ingoing current, and improperly sifting and freeing it from mechanical irritant, so that in the complete or partial obstruction where buccal respiration is compulsory the air reaches the deeper passages and too low a temperature, and is in too dry a condition; hence intra-nasal disease stands in causal relation not only to secondary diseases of the intestinal tract, but also contributes to the development of laryngeal, tracheal and bronchial inflammations. Obstructive nose diseases are also influential in the causation of various neuroses, such as asthma, paroxysmal sneezing, hay fever, and cholera; while catarrhal and general fevers are not infrequently produced from the same cause.

Abstract of Observations of Twenty-five Cases of Ear Disease, occurring as Sequelæ to Epidemic Influenza, in San Francisco, between 1889-1892. By M. C. O'Toole, San Francisco.

Epidemic influenza has prevailed in San Francisco, and throughout the State of California generally, since the winter of 1889-90. Observations of twenty-five cases of ear disease, occurring as sequelæ to this epidemic, may be of interest.

Number of cases—25.

Primary, having had no previous ear or throat trouble ...	16
Had chronic pharyngeal catarrh	4
Adenoid vegetations in naso-pharynx...	2
Pulmonary tuberculosis...	2
Chronic purulent suppurations of middle ear	1

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In ten of these primary cases, and in all the others, the ear symptoms set in as acute purulent inflammation. Six commenced as acute catarrhal otitis media; of these four passed into the purulent form within the first twenty-four hours of the attack.

In both cases having adenoid vegetations in the naso-pharynx (boys, nine and twelve) the ear disease set in as acute suppuration. The general symptoms were treated energetically from the first, but without material benefit until the vegetations were removed. The cessation of ear complications on the removal of these obstructions would imply that the inflammatory action originated in these bodies.

A woman, aged thirty-eight, who had chronic suppuration of the middle ear with perforation of the membrane for eight years, died of meningitis on the tenth day of the attack of grippe. She lost consciousness on the fourth day. *Post-mortem* examination showed purulent infiltration of the sub-arachnoid lymph spaces, with marked congestion of the vessels of the pia mater.

Both cases of tuberculosis were under observation for laryngeal complications previous to the attack.

All the symptoms were aggravated by the presence of this disease, the laryngeal structures becoming suddenly œdematous and ulcerated. Both cases succumbed to a diffused broncho-pneumonia. Suppuration and disintegration of tissues proceeded rapidly, in apparent defiance of all treatment.

The characteristic distinctions observed in aural manifestations occurring as sequelæ to epidemic influenza, as compared with similar forms of ear disease free from this complication, may be stated as follows :—

First—Suddenness and intensity of attack.

Second—Vomiting, as one of the earliest symptoms, often accompanied by vertigo and sensations of rotation around a vertical axis.

Third—Marked tendency to cell proliferation, with serous infiltrations, notably between the layers of the membrana tympani and in the faucial orifice of tube.

Fourth—Intractability to treatment.

Fifth—Tendency to recur after apparent recovery.

Sixth—Tinnitus aurium, aural vertigo, and impaired hearing were observed (intermittingly in two cases) after the objective symptoms had subsided. When percussion over the region of the mastoid caused pain, hyperæmia of the middle ear was suspected. Here inflation seemed to increase the deafness, but all the symptoms (notably the vertigo) were improved by leeching, hot applications, etc.

The formation of an exudation beneath the dermoid layer of the membrane is believed to have prevented spontaneous rupture; such having occurred in one case only.

Bullea or blebs upon a bulging, injected membrane were observed in four ears; these were caused by the deposit of a blood-stained infiltration beneath the dermoid layer; in one case this layer was completely detached. (He forwarded the specimen.) The bulging of the membrane—a condition frequently observed—was caused by a copious serous infiltration into the drum cavity. In recent cases this condition was

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relieved by suction with Siegel's apparatus, after paracentesis. In three instances, when treatment was neglected for a week and over, the deposit became thickened, and could not be removed in this manner.

During the first winter of the epidemic, two cases came under observation which suggested impairment of the function of the auditory nerve; both subjects were advanced in years, and in both deafness came on suddenly and was almost absolute, with loss of equilibrium and other symptoms, pointing to involvement of the labyrinth, the tuning-fork being heard but faintly when the meatus was stopped. In each case there had been delirium and hallucinations during the earlier part of the attack; neither had previously shown neurotic tendencies. Hearing was most impaired when mental depression and physical debility were greatest, but improved with returning vigour. Temporary impairment of the function of the auditory nerve was probably owing to the general neurasthenia, aided by pressure upon the cochlea through hyperæmia of the tympanic cavity.

The removal of impacted exudation or granular particles from the faucial orifice of the tube is facilitated by using a catheter which for some time past has served for the removal of fragments of adenoid vegetations. When in position the bulb at distal end is moved backwards and forwards. The particles, being detached, are drawn into the catheter by suction.

Spontaneous Cure of Multiple Papillomata of the Larynx after Tracheotomy. By Dr. Joseph A. White, Richmond, Va.

Dr. White reported a case of cure of recurring papillomata of the larynx, after tracheotomy, in a boy eleven years old, who was operated on in June, 1887. He had previously removed the growth *per vias naturales* several times with a more pronounced recurrence each time. An attack of suffocation, which brought the child to death's door, necessitated the tracheotomy. Any subsequent attempt to remove the growth resulted in increasing the neoplasm. When all operative efforts ceased they began to disappear spontaneously, and the case is now well. The tube has been worn five years. The voice is perfect and health good. An interesting point of the case was the development of a well-marked isolated papilloma on the under side of the epiglottis. The case also developed tracheal papillomata after the operation, which has delayed the removal of the tube. Dr. White was advised, but declined, to perform thyrotomy, because of the prospective injury to the voice.

It is the sixth case in laryngological literature of spontaneous cure of these growths after tracheotomy, the others being reported as follows:—Two by Prof. Oertel, quoted by Hoppman; one by G. Hunter Mackenzie; one by Eliasberg, which closely resembled the author's case; and one by Garel.

It is also the only case of papilloma of the epiglottis, except the one reported by Uchermann.

Dr. White argued that tracheotomy was preferable to thyrotomy, because it was equally free from danger to life, and did not injure the voice. He also made some remarks on the causation of laryngeal papillomata in children, and called attention to their connection with adenoids of the naso-pharynx.

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Peroxide of Hydrogen and its use in Ear Diseases. By Dr. WALTER B. JOHNSON.

The peroxide of hydrogen, fifteen volume solution, is the strongest solution necessary for medical purposes. It should be reliable and fresh, when it is harmless for internal and external use.

The chemical action takes place immediately upon its application to diseased tissues; nascent oxygen and water is the result. The nascent oxygen is the valuable constituent which destroys germs—pus, and the products of fermentation. It is rapidly converted into oxygen during the reaction, the froth which results from the chemical action is a protective for the exposed tissues. It is said to be the most active germ destroyer, being one and a half times stronger than bichloride of mercury.

The peroxide solution has many advantages over any of the other germicides for cleaning deep cavities:—

Its susceptibility to use in any quantity without danger of toxic effect.

The certainty that the pathogenic bacteria of any species are totally and rapidly destroyed. The ability not only to destroy the products of decomposition and fermentation, but by the quality of effervescence during decomposition to carry forward and without the wound all such products which it would be difficult to reach with ordinary solutions by syringing or injection.

Any remedy may be used in the treatment of the disease subsequently to the application of the solution, the effect of the application itself being simply to render the parts perfectly aseptic, and place them in a favourable condition to assist Nature's reproductive process.

It may be used to advantage in catarrhal otitis, also in suppurative otitis, and in mastoiditis after the incision has been made. It is to be applied to the diseased tissues frequently three times each day, and does not counteract or interfere in any way with the use of any other desired remedies.

Its action on carious or necrotic bone is unique; it causes its disintegration and removal, and has nothing but a beneficial effect on the living bone substance.

The result of this line of treatment, which has been followed in a considerable number of mastoid cases, has indicated the possibility of a degree of conservatism in the treatment of mastoid disease which is very desirable.

All the cases treated have done well, no deaths have occurred, and in no case was it considered necessary to scrape the bone or to remove any portion of it, while the period of time necessary for the wound to assume a sufficiently healthy condition to render it advisable to permit it to close did not seem longer than the time which must ordinarily elapse after the operation for thoroughly scraping the mastoid, and was much shorter than the time required before the wound produced in chiselling the mastoid could possibly be allowed to close.

The Physiology and Pathology of the Tonsils. By Dr. JOHN NORTH.

The conclusions of the paper were as follows:—

That the faucial tonsil is a collection of from twelve to sixteen separate

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and distinct simple and compound follicles and capsules that are found between the anterior and posterior pillars of the fauces.

That simple and compound follicles, with their capsules, are found in all mucous membrane.

That the mucous follicles are not distinct glands, but are simply a folding or depression in the mucous membrane, for the purpose of increasing the surface of the membrane.

That the epithelial cells lining these follicles are the glands proper that secrete the mucus.

That the epithelial cells lining the follicles do not differ from the epithelial cells upon the smooth surface of the mucous membrane in the same locality.

That the crypts of the tonsils are simply the opening into the follicles, where the mucous membrane reduplicates itself.

That in the healthy condition the space between the anterior and posterior pillars is an inverted trough.

That the tonsil in health does not protrude beyond the surface of the membrane.

That where the tonsil protrudes beyond the surface, it is in an abnormal condition.

That the principal function of the epithelial cell is to secrete mucus to moisten and lubricate mucous membrane.

That mucus accumulates in the follicles of the membrane, to be used when occasion demands.

That there is no proof that the tonsil is a blood-elaborating organ.

That children with enlarged and diseased tonsils are not as well nourished, nor as well developed and healthy, as children with sound tonsils.

That there is not sufficient evidence that the tonsils are "leucocyte manufactories."

That the leucocytes do not reside on the tonsils any more abundantly than in other parts of the body.

That enlarged tonsils have the power of absorbing septic poisons, and furnish a good media for their development.

That the tonsil is not a gland, but is an aggregation of mucous follicles, with as many openings as there are follicles.

That with our modern methods of cooking and preparing foods, there is no well-recognized use for the tonsil.

That diseases of the tonsils are generally the result of micro-organisms, or an underlying dyscrasia or constitutional taint of the system.

That in health the follicles contain mucous and exfoliated epithelial cells, and that cultures of the contents are negative.

That in enlarged and diseased tonsils the contents of the follicles are filled with pathological products, the result of retrograde metamorphosis and fatty degenerations. Cultures made from their contents show the presence of micro-organisms.

That impure air will not cause tonsillitis if the follicles are in a healthy condition, and when there is absent germs.

That pathogenic germs are not so apt to develop if the follicles are in a healthy condition.

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That the condition of general enlargement of lymphoid tissue called "lymphoidism" depends upon the constitutional condition in the majority of cases, and requires constitutional as well as local treatment.

That tonsillitis and other inflammatory diseases of the tonsils are not always of rheumatic origin.

That the anti-rheumatic remedies which relieve this class of troubles do so on account of their anti-germ properties.

That inflammation of the tonsils may take place in the follicles or in the adenoid tissue.

That in the partial destruction of the follicles we very often have inflammation taking place, on account of the closing of the orifices of the remaining portion of the follicles.

That true hypertrophy of the tonsil seldom if ever takes place.

That we often have hyperplasia of the tonsils.

That enlarged tonsils are usually a combination of hypertrophy and hyperplasia.

That every enlarged tonsil is a pathological product, and that it is a tumour.

The Operation for Excision of the Ossicula in Chronic Aural Catarrh, with Instance of a Failure. By Dr. H. V. WURDEMANN, Milwaukee.

The author disclaims any intention of maligning surgical procedures in aural disease, as he is convinced of their utility by his own experience. No cases hitherto have come to his knowledge in which the hearing had been made worse by excision of the larger ossicle in these cases.

The patient was a strong, healthy man of sixty, who complained of increasing deafness, tinnitus, and vertigo. He claimed right ear to have discharged many years ago, and since that time had been "totally" deaf on that side. The left ear had been failing for about five years, and conversation was now carried on with difficulty. The patient could hear tuning-fork of low pitch, and the bone conduction was relatively better on the right or deafer side; loud sounds also heard. On the left side he could hear the watch by pressure, whisper two centimètres, and voice one and a half millimètres. Drumheads retracted and opaque with chalky deposit in membrane. Eustachian tubes of both sides patulous. Has hypertrophic rhinitis and deviated septum.

The nasal trouble was greatly benefited, but after four weeks' treatment by vapours and injections, through the catheter, he was no better as to the tinnitus or hearing. The probable benefits of the operation of excision were held out to the patient, and the operation performed under ether. The malleus and membrane were extracted without difficulty, and although several attempts were made to bring the incus into view by the incus hook, no reckless gouging was done. The patient did not take the anæsthetic well, and became cyanotic at times, delaying the progress of the operation. On the next day he was found *to be totally deaf on the operated side*, and complained of great dizziness. The latter was ascribed to the after effects of the ether. A few days later suppuration set in, which stopped in two weeks. The after-treatment for the first few days

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consisted "in letting bad enough alone," and afterwards in gentle removal of the discharge by a pledget and boric acid solution.

In spite of subsequent treatment by pilocarpin, mercurials, electricity, and local treatment through the catheter, the patient has continued practically stone deaf to the time of writing, one year to the date of the operation. Treatment was continued on the other side with beneficial results, to the gratification of all parties concerned. Massage of the drumhead and mobilization of the ossicles by cotton tipped probe, applied directly to the malleus, combined with the use of Siegel's otoscope and the catheter, were the principal thereapeutic means to which the improvement could be ascribed.

This is the first case happening in the author's practice in which suppuration occurred after the operation, although this is a common occurrence as reported by others.

He thinks that the lesion in the case was a hæmorrhage into the labyrinth occurring during the progress of the anæsthetic. He concludes that the lesson of this case is that our prognosis must be more guarded in the future as to the results of excision of the ossicles and drumhead in chronic aural catarrh, and that patients of the age of this one are unfavourable for operation.

Compressed Air in Diseases of the Nose, Throat, and Ear. By Dr. SETH SCOTT BISHOP, Chicago.

The author gave the results of a series of experiments to determine the various amounts of air-pressure necessary for effective treatment of the ear, throat, and nose.

He found that the rubber air bags in common use by Americans exert a pressure of from six to fifteen pounds. While these afford sufficient pressure for spraying the nose and throat with hand atomizers, which do not require more than from eight to twelve pounds, they do not provide enough force for treating certain conditions of the middle ear, the dosage for which, in some cases, amounts to sixty or eighty pounds, or more.

In order to adapt the improved compressed air apparatus to the safe treatment of the latter class, Dr. Bishop has contrived an air meter, which places the volume of air and height of pressure within the knowledge and control of the operator.

This air meter consists of an air-pressure gauge placed between two valves in the escape pipe of the air reservoir. While it serves the purpose of indicating the whole number of pounds pressure in the reservoir, it also shows the height of pressure of the column of air that is escaping through the cut-off at the end of the treatment tube. One valve governs the volume of air used, while the other determines the amount of pressure.

This device places the use of the high pressure apparatus on a scientific basis. All guess-work is eliminated. A definite dosage of compressed air is made possible. Interrupted currents can be propelled into the middle ears with as high a pressure as seventy or eighty pounds, with the volume diminished in inverse ratio, with safety. But without this meter to guide in proportioning the volume to the density, the high pressure apparatus would not be safely available for ear treatment.

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Dr. Bishop gave a detailed description of the air meter and directions for its use in projecting camphor-menthol and liquid lanoline and other sprays into the Eustachian tubes and middle ears. By this method, not only is the air filtered but the tubes and middle ears are medicated. With these controlling valves he has employed as high as ninety pounds pressure in certain chronic affections of the ears without any ill effects, and no case of rupture of the drumhead has ever resulted. Thus the ear is rendered nearly as accessible to treatment with the various volatilized medicaments and sprays as the nose and throat.

It is evident that an instrument that affords safe treatment with such high pressures can accomplish results that are impossible by means of rubber bags that furnish, at most, not more than one atmospheric pressure, or about fifteen pounds. But it should always be remembered that with a high pressure a small volume of air must be used. The following rule is proposed to keep the operator within the limits of safety :—The higher the pressure the lower the volume should be.

Another point worth remembering is that the pressure used in such cases as have atrophied soft palates should not be strong enough to strain them, especially if they are subject to attacks of rheumatic sore throat.

Dr. Bishop has adapted the Buttle's inflators to be operated by the improved compressed air apparatus, with the result of making the use of the Eustachian catheter unnecessary in the majority of treatments. With these inflators, containing medicated sponges and fitted with the nasal tip, the ears can be inflated and medicated on the principle of politzerization when the rubber balloon would fail. Consequently we may avoid the risk of irritating the nose and throat, and of conveying infectious germs by the catheter.

The same medicated inflator is fitted with a catheter tip to inject lanoline sprays into the middle ears through the catheter when required.

Catarrhal Sore Throat in the Lake Region. By Dr. J. M. G. Carter, Waukegan, Illinois.

This paper does not discuss croupous and diphtheritic inflammations of the throat, but the catarrhal forms which are most frequent on the shore of Lake Michigan, and which usually terminate in recovery in from three to five days. During the last nine years the writer has treated more than two thousand cases of this form of sore throat, and has made careful study and observation to determine the etiological factors which combine to produce the disease. These observations and investigations have convinced him that climatic changes, such as variations of temperature, humidity, direction and force of winds, ozone, electricity, and the like, are the chief known causes of these affections. Cyclonic disturbances are accompanied and followed by outbreaks of catarrhal, as well as croupous and diphtheritic sore throat. Ozone has a tendency to dissolve membranes, and keep albuminous exudates in a liquid state. Hence, when ozone is abundant in the air, membranous formations are more easily controlled ; but as ozone is an irritant to the respiratory mucous membranes, there may be as many severe cases at such times as when the atmosphere is damp, but the severity is generally due to

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congestion and swelling and the destruction of tissue, not to the excessive formation of false membrane. The writer thinks that these diseases affect the Indians somewhat as they do people who are acclimatized, though perhaps less severely.

There is reason to believe that these cases are often, if not always, of bacterial origin, and the fact that the outbreaks occur under particular atmospheric conditions makes it probable that the climatic variations cause such changes in the mucous membranes as to render them suitable soils for the development of bacteria. These cases often appear to be contagious. Albumen occurs in the urine of many of these cases, but is perhaps due to febrile disturbance.

Astringent gargles, alcohol and glycerine gargles, yerba rheuma and other drugs by atomization ; menthol, alcohol and camphor inhalation, and variously medicated vapours have given satisfaction in the treatment of this class of cases. The prognosis is always favourable.

A Case of Papilloma of the Epiglottis, &c. By Dr. A. B. THRASHER, Cincinnati.

Miss Pearl S., seventeen years of age, Springfield, Ohio, was referred to me by Dr. Langdon, March 3rd, 1892. The vault of the pharynx was covered with adenoid tissue, rough and lobular, which extended from the region of Luschka's tonsil, back and down over the posterior pharyngeal wall, to a point on a level with the upper surface of the epiglottis. This tissue was apparently about half an inch thick in the centre above, and gradually grew thinner as it extended downward and toward either side.

On pressing down the tongue a reddish glandular tumour was disclosed, which, on further examination, proved to be attached to the epiglottis. The tumour was about the size of a large English walnut, the surface being divided at irregular intervals by deep seams, and covered by small granulations, giving it somewhat the appearance of a large lobular strawberry. It was attached to the free border of the epiglottis, rather more on the upper than the under surface ; the balance of the epiglottis presented a normal appearance as to both size and colour. The weight of the neoplasm was so great as to press the epiglottis downward, and its size so large as to completely shut off the under parts of the larynx from the laryngeal mirror. The voice was quite husky, and a nervous cough had been present for some time. There was increasing dyspnœa for some three months, this being really the symptom which caused the patient to seek relief.

After the epiglottic neoplasm had been removed, which was accomplished by means of a wire *écraseur*, the interior of the larynx was revealed. The movement of the left vocal cord was considerably impaired by some small sessile growths in the ventricle and over the left ventricular band, macroscopically quite like the tumour on the epiglottis.

After the lapse of two months there is, as yet, no tendency towards a recurrence of any of this tissue, that in the naso-pharynx and larynx having been removed by curette and galvano-cautery. No microscopic examination of the tissue was made, but the clinical history points to papillomata of the larynx, while the pharyngeal growth seemed to differ in

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no respect from that which the author has in other cases classed as adenoid tissue.

A Case of Spastic Contraction of the Tensor Tympani Muscle. By Dr. C. W. RICHARDSON.

The essential features were the occurrence of ticking sounds heard in both ears, audible through the medium of the otoscope. The clicking sound was not synchronous in both ears, and not synchronous with the heart's action. The sounds in right ear were more rhythmical and more frequent to the minute than the left. There was no spasm of palati or constrictor muscles. Membranes were slightly dull, contracted, and manubrium directed almost vertically inwards; umbo resting upon promontory. There was no visible movement of membranes. Inflation through Eustachian catheter caused a change in character, and subsidence of snapping sounds. After several inflations there would be a momentary cessation of snapping sounds, followed by several short, sharp clicks, and then a cessation, followed again, in a moment, by the regular contraction. If inflations were persisted in, the sounds would subside for many minutes or several hours. After about six months' treatment the noises ceased. Patient died from a gradually progressive case of pachy-meningitis. From the autopsy, marked changes were manifested in membranes, cerebral cortex and in ventricles. The spasm of muscle was evidently due to centric irritation.

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(*Continued from page* 349.)

Dr. FAUVEL.—*On a New Symptom of Laryngeal Paralyses.*

This is a symptom Dr. Fauvel has for many years noticed, and consists in a particular odour exhaled by patients with paralysis of the laryngeal muscles. Since 1872 the author has noted the association in fifty cases. He gives in detail two cases of paralysis of the left recurrent due to aortic aneurism, where the garlic-like odour was very marked, and states that it is in these cases where the odour is most evident. He has also noted its occurrence in hysterical, rheumatic, and syphilitic paralyses, and those of central origin (locomotor ataxy, disseminated sclerosis), and of peripheral origin (compression by tumours, apical tuberculosis). In all these cases care has been taken to determine that the odour did not proceed from the nasal or pharyngeal passages, the mouth, trachea, bronchi, lungs, or stomach. Moreover, repeated washings have not got rid of the odour, and it was not due to any drug the patients were taking. The urine has been examined to exclude diabetes, and the result arrived at that it is an odour of the breath distinctive of laryngeal paralysis. It probably arises from secretions pent up in the larynx which cannot be rejected, dry and decompose. A steam spray of

Cherry-laurel water	50	grammes.
Carbolic acid	0·50	,,
or thymol	2	,,
Distilled water	500	,,

is recommended, and internal administration, except in hysterical conditions, of iodide of potash. As the paralysis diminishes, the garlicky odour disappears.

Dr. POYET stated that he had sometimes observed fœtidity of the breath in

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persons with laryngeal paralysis, and had attributed it, as Dr. Fauvel had done, to fermentation of secretions which remained stagnant in the larynx or in the ventricle.

Dr. CARTAZ.—*On the Treatment of Rebellious Suppurations of the Maxillary Sinus.*

There are many cases in which, though amelioration is rapid, cure is very slow, or where when the patient ceases the irrigations the drainage tube is removed too soon, or for some other reason, the primary condition recurs. There are many cases in which it seems necessary to keep the fistula open for many months. Are there any points for prognosis of more or less rapid cure? or is there any explanation of those differences?

One point certainly must lead to diffidence in prognosis, viz., the long duration of the suppuration before the patient is treated. When this has lasted months or years, there is probably not simple retention but chronic inflammation, in which the bony skeleton subjacent may be implicated. There are unfortunately few signs to indicate the extent of these lesions or the degree of inflammation.

Electric illumination, though good, is not absolute. In most cases it furnishes excellent results, and the author has never punctured the sinus when it was not translucid without finding pus, and in three cases where, in spite of translucidity, he punctured the sinus he found no pus. The thickness of the bones, or variable conformation of the sinus in different individuals cannot modify the results of this examination if physiological conditions are normal. If no lesion of tissues or of bones exists, transparence must appear very clearly. It has degrees; when the mucous membrane is inflamed, or when the layer of pus is more or less thick, is perhaps the secret of the divergence which exists between rhinologists as to the value of this sign. Electric illumination teaches us by the opacity of the walls the presence of pus in the antrum without permitting an opinion as to the prognosis of cure of the abscess.

Another case of delayed cure is multiplicity of bad teeth. If one tooth by alveolar periostitis may cause inflammation of the antrum, it is legitimate to suppose that after extraction of the worst a nucleus of irritation may remain and keep up suppuration.

Sometimes fibro-cartilaginous septa exist, leading to lodgment of pus, which drainage through the nose or alveolus incompletely empties. After prolonged suppuration true osteitis may exist resisting simple antiseptic washes.

LUC has reported cures after ablation of fungosities and sequestra in patients who had long been unsuccessfully treated. When alveolar perforation has been for a long time followed by antiseptic washes, without leading to suppression of the flow, it is difficult to foresee cure without more radical methods, though it is not necessary to operate too early. Strong washes may be employed—two to five per cent. carbolic solutions, somewhat concentrated solutions of sulphate of alumina and potash, insufflations of iodoform and aristol. Failing these, ten per cent. chloride of zinc injections are to be held in the antrum five to six minutes, and then wash with boracic solution. The author has used "liqueur de Villatte," but the reaction was painful. It, however, cured the abscess. If caustic and astringent injections fail, the author opens the sinus by the canine fossa and curettes the cavity. The operation is scarcely more severe than perforation of the alveolus, and gives an orifice large enough for electric exploration. The author relates two cases in detail where he followed this plan. He thinks that it should only be resorted to in special cases when ordinary methods have failed. Such cases are in his opinion less rare than is supposed.

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Dr. MOURE, like Dr. Cartaz, has seen empyemas resist all ordinary treatment. It is necessary to exert great prudence in the resort to surgical measures. The ordinary osseous walls are thinned, the orbital plate especially, and can be perforated with the greatest ease. Observations made by him upon crania show that there are considerable differences in individual cases. Osseo-fibrous bands are met with of different dimensions in the sinus, which hinder any treatment, especially curetting. There are also many cases which have no grave results, and which constant washes serve to keep in check for months or years. In these cases a half cure is better than the risk of an operation.

Dr. GAREL believed with Dr. Cartaz that in some rebellious cases an operation through the canine fossa is necessary. But prolonged irrigation has given unexpected results in one apparently hopeless case of empyema lasting for fifteen years. He thinks that operation should only be undertaken after definite failure to cure through the inferior meatus. As to the benignity of empyema of the antrum, he has known a patient who had each evening a temperature of 38·5° to 39° for two years, and which was only cured after operation.

Dr. MOURE, remarking that while catheterism of the antrum is apparently simple and easy, said he was not of this opinion. One portion of the orifice is often hidden or covered with the osteo-mucous lip of the infundibulum, and the osseous wall of the sinus in the middle meatus is in other cases extremely thin or papyraceous. He thinks that many catheterisms are simple perforations of this lamella, which is accomplished with great ease. This opinion he forms on observations made on numerous cadavers.

Dr. CARTAZ said that he had no intention of advocating opening through the canine fossa, curettage, or any operation. He desired only to speak of those cases in which the patient has arrived at such a condition as to require intervention, when the antrum cannot be reached through the alveolus, or this does not suffice to obtain cure. It must be remembered that perforation is often obtained through accessory orifices. He does not share Dr. Garel's opinion as to the ease of puncture through the natural orifice. In most cases it is difficult. He favours opening through the inferior meatus, which permits of reaching the middle plane of the sinus. He shares Dr. Garel's opinion as to the necessity of employing energetic irrigation before resorting to operation. In his observations he had in view only rebellious cases, where it was necessary to obtain as large an opening as possible.

Dr. GARRIGOU-DESARÈNES.—*Electrolysis of the Nasal Fossæ with Electrodes of a New Model.*

For the last four years the author has employed platinum wires united at their extremities, and forming small laminæ of four layers separated about a millimètre. They are ten centimètres long and one centimètre across. With these electrodes he has obtained cures much more promptly than with complete platinum plates of the same dimensions. In order to get the contact of the electrode with the mucosa as complete as possible he often applies a *pince-nez*. If only one of the fenestrated laminæ is to be used, the others are covered with a very thin layer of caoutchouc, held in place by threads or by a band of paper. He always uses current strengths of twenty to thirty milliampères, but has attained ninety milliampères. Tolerance becomes greater when the contact has lasted some minutes. He uses a sulphate of mercury battery with a collector. The sittings last ten minutes. Having used electrolysis for ten years, the author has never met with any accident, and most cases have been completely successful. The same result is obtained with a less current and longer sitting. Cocaine (five per cent.) may be

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previously applied. The other electrode is composed of lead, thirteen centimètres long and nine centimètres broad, covered with chamois and moistened with salt and water. It is placed upon the neck or knee. It ought to be shifted every five minutes or less to avoid blistering.

The author uses electrolysis for hypertrophy of the turbinateds, for chronic simple coryza and atrophic catarrh. Its employment in spurs and deviations of the septum has given excellent results. [The author leads us to the inference that he indifferently applies the positive or negative pole to the affected part.]

Dr. MOURE was astonished that with intensities of eighty to ninety milliampères and monopolar electrolysis the patients had not experienced extreme pain, salivation, etc. He had not been able to go beyond thirty milliampères. The difference is probably due to the different galvanometers employed.

Dr. MIOT was astonished to hear of currents of ninety milliampères. He never exceeded twenty milliampères. In some he had reached with difficulty twenty-eight milliampères, and only in one forty-five. He used Gaiffe's galvanometer, while Desarènes used Chardin's, the graduation of which was different.

Dr. GARRIGOU-DESARÈNES said that it was upon northern patients he had used the greatest intensities. In a Warsaw physician he had used ninety milliampères for a sitting of five minutes, and forty milliampères in other sittings. The patient only experienced supportable pain and great salivation. In another, a Russian, he used sixty milliampères in two sittings of five minutes each.

Dr. DARZENS.—*On a New Mode of Treatment of Syphilis, and especially of severe Syphilis of the Nasal Fossæ, by administration of the iodides of potassium, soda, and ammonia. Advantages of this process and explanations of its success.*

After relating a case in detail, the author remarks that when iodide of potassium in average dose (1 gramme) is given to an ordinary individual the drug appears in the urine a few minutes after ingestion, and the greater part is eliminated at the end of half-an-hour. This elimination then diminishes until all is got rid of after about thirty-six hours. In some individuals this elimination is very rapid, almost immediate, and in such persons iodide can never have any utility. A means must therefore be sought of retaining the iodide in the system. Iodide of soda and iodide of ammonia are more soluble than iodide of potash, and they are eliminated by the kidneys before the latter, which will consequently be retained in the organism.

The author administrates—

Iodide of potash ,, ,, soda ,, ,, ammonia	...	āā 15 grammes.
Biniodide of mercury	...	0·05 centigrammes.
Water		300 grammes.

To take two tablespoonfuls daily.

Alkaline and carbolic washes are also prescribed for the nasal fossæ.

Dr. MOURE.—*A new Case of Indurated Chancre of the Left Nasal Fossa.*

The author in 1887 communicated to the French Society of Laryngology one such case, and Dupond in 1887 ("Etude sur la syphilis du nez et des fosses nasales"—Thèse de Bordeaux—Paris: Odoin) could only find three recorded cases. Cozzolino ("Revista clinica de l'Un. di Napoli," Jan. 1889) has added three cases. During the last year the author has observed a fresh case occurring in a man of twenty-five. The lesion was situated on the quadrangular cartilage, where there was a fungous ulceration, the septum being thickened and tumefied. The

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ulcer was covered with pseudo-membranous exudation, removal of which left a bleeding surface.

Dr. HICGUET had seen two cases of chancre of the nasal septum. Both were in typographers, who were accustomed to use snuff and to employ a common snuff-box, the only explanation which could be given as to the origin of the disorder.

Dr. LACOARRET.—*Syphilitic Condylomata of the Nasal Fossæ.*

As secondary manifestations in the nose up to the present have only been described, ulcerations are oftenest under the form of fissures of the nasal introitus, whilst mucous patches of the pituitary membrane are much rarer. Syphilographers have not recognized verrucous and vegetating productions (condylomata) as secondary manifestations in the nose.

The author observed a case of condylomata of the right side of the nasal septum in a boy aged seventeen. There had been a chancre of the penis, and verrucous patches of the fauces were present. The septum was the seat of a lobulated tumour of greyish colour, projecting from the septum and about a centimètre in every diameter. Under biniodide treatment, and local applications of acid nitrate of mercury and gargles of iodo-iodide, he made good recovery.

The condition might have suggested tuberculosis or simple papillary degeneration, but the diagnosis of syphilis was confirmed by the treatment. If such lesions resist ordinary internal and external treatment, stronger local measures (strong iodine fifty per cent., acid nitrate of mercury to fifty per cent.) chromic acid, or galvano-cautery may be resorted to.

Dr. BEAUSOLEIL.—*Eversion of the Ventricle of Morgagni.*

Beyond the causes already known (hypertrophy, chronic eversion, diathetic inflammations) the author adds a case of purely inflammatory origin arising in acute laryngitis, and retrogressing when this disappeared.

The patient was a man aged thirty-two, who had had two previous attacks of catarrh and aphonia since March, 1890. In November, 1891, he suffered another attack, which was rapidly followed by aphonia, which this time did not disappear. On the left side of the larynx was perceived an oblong antero-posterior swelling occupying the fore edge of the ventricular band, with which it was continuous. It completely covered the left vocal cord, and was lost in the angle of the thyroid. During strong inspiration its volume diminished a little, permitting the edge of the vocal cord to be seen. The colour of the swelling was that of the ventricular band, and at its anterior end a little whitish fold, produced by folding of the mucous membrane, was seen. Treatment for simple acute laryngitis was adopted without diminishing the tumour, though all inflammation disappeared. Under applications of chloride of zinc the hernia disappeared.

It is probable that the earlier attacks of laryngitis and aphonia in this patient were accompanied with hernia of the ventricle. After his cure, a slight projection of the anterior portion of the ventricle still persisted.

Dr. FERRAS.—*A Case of Infectious Angina.*

The patient, a man of nineteen, on 24th November, 1891, had sore throat. On 1st December some red spots appeared upon the body. Next day the eruption extended to the lower limbs, and there were severe lumbar pains and swelling of both knees, which were very painful on movement. The eruption was a polymorphous erythema, forming festoons and circles, with an internal purpuric zone, and an external more recent and congestive zone, elevated and œdematous. Inguinal adenopathy existed. There was marked œdema of the malleoli, hands and feet. Temp. 30°. Some herpes existed on the lips. In the throat was a

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simple slightly pultaceous angina, with injection of the anterior pillars, and some superficial ulcerations, recalling those of the angina, the date of which he fixed at the 24th November, before any of the subsequent symptoms. Then followed lively muscular pains in the arms, which were half-flexed and motionless, and there was rapid muscular atrophy. The angina disappeared, and endocarditis supervened, which yielded to treatment. It resembled the endocarditis described as septic by Bouilland. On the 2nd January the patient was well.

The author derives the conclusion that simple anginas should be treated energetically, and regards camphorated naphthol as the best local application, and hyposulphite of soda (two to four grammes a day) as the best internal treatment.

Dr. MOURE.—*Abscess of the Larynx consecutive to Scarlatina.*

Laryngeal complications in scarlatina are rare according to Trousseau, except in scarlatinal diphtheria, an error of observation which those who have since quoted Trousseau have wrongly attributed to him.

Dr. Moure gives the details of a case of scarlatina in a young man of twenty, convalescent, and who had experienced suffocation, and had expectorated blood-stained and putrid sputum. From the first he had suffered with great sore throat, and immediately after the disappearance of the eruption with fever, intense pain in the throat, hoarseness, and tumefaction of the angle of the jaw. Laryngoscopically Dr. Moure found the epiglottis red, denuded of epithelium, erect, and on its laryngeal face presenting a swelling especially marked at the extremity of the ventricular band. The ary-epiglottic fold of the same side was swollen and covered with muco-pus. Prepared for tracheotomy the same night, the condition improved and the swelling rapidly disappeared. Antiphlogistic treatment was prescribed (revulsions and emollient fumigations).

Dr. Moure is of opinion that many of the cases called acute œdema of the larynx are simple abscess. Certain authors consider acute abscess of the mucosa of the larynx as a true acute erysipelas or infectious phlegmon.

Dr. LUBET-BARBON related a case where nothing indicated the accidents which ended in the formation of a large abscess. On the previous Sunday a patient entered the Hôpital Cochin with difficulty of breathing. Suffocation became so intense that tracheotomy had to be performed. During the night the temperature rose from 37° to 39°, but fell in the morning. Pus containing numerous pneumococci was found in the canula. Laryngoscopic examination was not possible from the swelling of the epiglottis: the cavity of the larynx was filled with a red œdematous mass. This, with the finger, was found to be superficially smooth, soft, and fluctuating, and at the bottom hard and resisting, recalling the sensation of the epiglottis. The tumefaction extended to the left ventricular region, where fluctuation was distinctly perceptible. Incised with a knife, sanguineous pus containing numerous *staphylococci aurei* was exuded.

Dr. GAREL some years ago published a case of acute œdema of the larynx succeeded by pneumonia, and which at the time suggested infection by pneumococci. Since then Dr. Josserand has published a case in which this hypothesis has been proved microscopically. As in the former case laryngeal œdema was complicated by pneumonia, and later on by a vaginal abscess. Pneumococci were found in all the abscesses. Other pathological agents than pneumococci may determine acute œdemas of the larynx.

Dr. POYET had seen a similar case some years ago. The patient exhibited considerable tumefaction of the left arytenoid, producing attacks of suffocation, pain on deglutition and alteration of the voice. The right side of the neck was the seat of hard induration from the ear to the clavicle, suggesting a carcinomatous laryngeal tumour.

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All symptoms disappeared under simple emollient treatment—cataplasms, hot carbolic gargles and sprays—but returned after a chill, suddenly and violently, this time lasting long and necessitating tracheotomy, when the patient began by expectorating pus and recovered. The laryngoscope showed that the pus came from an abscess which had opened over the left arytenoid. The patient was immediately afterwards attacked with acute articular rheumatism, and Dr. Poyet believed that he had to do with a suppurative rheumatic arthritis. The patient is now quite well.

Dr. FAUVEL said that one day he was called by Trousseau to see a young girl who had had scarlatina running an abnormal course ten years previously. Desquamation had been suddenly suppressed. On examining the throat he found false membranes which led every three or four days, before expulsion, to considerable catarrh. Treated with tincture of iodine and nitrate of silver no result was obtained. Trousseau regarded the case as eczema of the trachea consecutive to scarlatina. Lhéritier, who was a great fancier of horses, suggested using an empirical treatment, which ordinarily succeeded well with those animals. This consisted of local swabbings with tincture of aloes. At the end of eight days of this treatment the patient was cured.

Dr. MOURE said that an interesting fact appeared to be that these abscesses developed with frightful rapidity. It is not surprising that they should be confounded with acute œdema of the glottis, which some authors consider to be true infectious phlegmon (erysipelatous) of the larynx. One lesson is learned—that is, the danger of digital explorations which determine an attack of suffocation. It should always be insisted that the laryngeal mirror should always replace digital examination.

Dr. HICGUET.—*A little known Affection of the Tonsils.*

The crypts of the tonsils are special lodging-places for micro-organisms, and it is an affection of the crypts of which the author speaks. When the patient was first seen mycosis was suggested, but doubts were thrown on this by microscopical examination. The patient was a young girl of thirteen, who had had sore throat for about a month. There was slight pain and no fever. The tonsils were of nearly normal size, but the crypts filled with white-grey caseous matter from which small filaments projected like the hairs of a brush. A microscopic examination showed that these filaments were lamellæ of cornified epithelium without any other elements. All the points being cauterized with the galvano-cautery, recovery was rapid.

Dr. MOURE thought the case to be tonsillar mycosis.

Dr. CHARAZAC did not doubt that if thorough microscopic examination had been made the mycelium would have been discovered. Cornified substance is not ordinarily met with.

Dr. GAREL thought mycosis of the pharynx to be comparatively frequent. He had notes of at least eighteen cases. It is often confounded with tonsillitis with white points. Certain portions of the mycosis are at their deep extremity hard and yellow from incrusted salts, and this calcification explains the difficulty in removing some of these islets.

Dr. FERRAS could understand the difficulty of Dr. Hicguet, for if these phosphatic deposits were oftenest in the form of masses they would not contain the isolated filaments met with in this case.

Dr. HICGUET said the idea of mycosis had occurred to him at the outset, but if he had hesitated at that diagnosis it was because the tonsillar production differed from the common descriptions of mycosis.

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Dr. LUBET-BARBON.—*Bromide of Ethyl as an Anæsthetic.*

It is often necessary to give general anæsthesia for painful operations of short duration and small importance. Cocaine fails, and chloroform adds a new danger. Bromide of ethyl acts quickly, and its effects pass off rapidly. It is never accompanied with syncope like chloroform, but it requires certain rules to be followed which often are neglected, explaining the diversity of results. It is necessary to give the anæsthetic in large doses and without fear. A flannel mask should be applied as hermetically as possible to the face, covering the nose and mouth, and it must be folded so as to avoid contact of the anæsthetic with the skin, but not so as to allow any air to enter with the anæsthetic. The latter is poured on copiously and not drop by drop. The first struggles of suffocation are brief and shorter as external air is excluded. Five to six good inspirations suffice to produce anæsthesia. Sometimes this occurs before loss of consciousness, and a patient can be operated upon who is insensible and powerless, but able to obey orders, open the mouth, raise the head, and assist the operator. This is not the rule, however.

Complete muscular relaxation must not be waited for, ethyl bromide in large doses leading rather to contraction. If prolonged anæsthesia is required, as soon as the patient gives the first indications of sensibility a fresh dose must be given. Consciousness is regained with great rapidity. In a few cases cerebral excitement persists for some moments, resembling drunkenness. A great advantage of this anæsthetic is that patients are operated upon seated in a chair, since syncope is not to be feared. The author has used it for three years, and upon one hundred patients without any cause for alarm. All his adenoid vegetations and most aural polypi in difficult children have been operated on with this anæsthetic. It has to be given frequently in cases of spurs of the septum and hypertrophy of the posterior end of the turbinateds, but many times it has sufficed for the removal of diseased bones or scraping the tympanum.

Dr. MOURE said he had seen the author use bromide of ethyl, and had himself used it many times in children with excellent results. In adenoid vegetations especially it is marvellous. Absolute immobility is obtained, and even hypnosis of the patient who obeys commands. As soon as the operation is ended consciousness is recovered, and the patient can use his handkerchief and expectorate the blood. It has unusual advantages over chloroform, and the patient can be operated on seated on the chair. It is preferable for operations of short duration and for young subjects.

Dr. CARTAZ remarked that, if his memory did not fail him, the American journals had recorded four cases of death from bromide of ethyl. It is an anæsthetic which must be employed with caution, and ought not to be employed in prolonged operations.

Dr. HICGUET remarked that Dr. Lubet-Barbon had called attention to a state of cerebral excitement observed for a quarter or half an hour with bromide of ethyl. These are conditions never seen with chloroform, which is also more easily supported by children than adults. He makes children respire a little chloroform, which produces a state of intoxication sufficient for him to operate. He sees no danger in chloroform if properly administered, and finds no difficulty in operating with the head low.

Dr. SUAREZ DE MENDOZA asked whether it was really necessary to anæsthetize for post-nasal growths, if some present believed with him that chloroform ought to be reserved for too refractory subjects, or those excessively frightened at the sight of instruments. With a little patience, and by making the first attempts with great gentleness, a child can often be induced to give two or three sittings a

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week, and in two weeks the cure is complete. In more than one hundred cases he has never had occasion to give chloroform.

Dr. GAREL said that, like M. Suarez, he never used anæsthetics in the removal of adenoids. Great resistance on the part of children is very rare. He makes thorough local anæsthesia with cocaine, and, after the first application of the forceps, the child allows the operation to be readily completed. If it can be proved that bromide of ethyl is not dangerous, it will be a useful help to the operator.

Dr. LUBET-BARBON, in reply, said he did not wish to criticize the methods of Drs. Suarez and Garel. In reply to Dr. Hicguet, he would say that asphyxia by chloroform is produced especially at the commencement of the administration. The practice of Dr. Hicguet does not lessen the dangers of chloroform administration.

Dr. SUAREZ DE MENDOZA.—*On Some Inconveniences of the Nasal Douche, and on the means of avoiding them.*

Dr. NOQUET advised careful examination of the nasal fossæ, in order to determine that the passages were permeable, and that the fluid would easily flow out.

For a number of years he has used the English syringe in preference to Weber's syphon, and has never obtained the least inconvenience produced by the douche. The syringe is less likely than the syphon to allow penetration of liquid into the tympanum, because its jet is intermittent, and because the patient can cease to inject as soon as he feels the need of closing the mouth. It is important to use only solutions of well-filtered or at least boiled water. Then if liquid does get into the tympanum, it is aseptic and cannot cause purulent otitis.

Dr. SUAREZ remarked that the English syringe had its inconveniences—amongst others, inability of the patient to graduate the jet, thus often pushing more strongly than he ought to do.

Dr. NATIER.—*A Case of Crico-arytenoid Arthritis (right side) due to tertiary syphilis, observed in a woman of sixty years of age; difficulty of diagnosis; complete cure by iodide of potassium.*

The case is given in minute detail. It is remarkable by reason of the late appearance of syphilis. At twenty-eight the woman had had a still-born child, then two abortions, but from that time up to the present had exhibited no symptoms of syphilis.

The patient had had many attacks of articular rheumatism and neuralgia in the head. Deglutition was painful, there was frequent dry cough, and dyspnœa at night. At the base of the right arytenoid and on its anterior surface was a tumefaction, diffuse, and of the size of a cherry, and on its surface were two small lenticular ulcerations. The joint was completely motionless on articulation, and the vocal cord (right) scarcely moved from the mid-line. Sedative sprays were given to control the pricking and pain, and iodide was given internally. Neglecting the treatment the symptoms became much aggravated, especially pain and dyspnœa at night, and cough which provoked nausea. The patient lost flesh very greatly and appeared in a desperate condition. Sharp pains were felt in the right ear. A round tumour was seen now to project from the right arytenoid region, with numerous ulcerations on its surface. The growth spread to the right side of the epiglottis, where there was also an ulcer. The right ventricular band was greatly proliferated, and had a large ulcer on it. The vocal cord was no longer visible. The laryngeal opening was considerably contracted, explaining the

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increased dyspnœa. There were no enlarged glands in the neck. The condition resembled epithelioma, but before radical operation full doses of iodide (eight to ten grammes a day) were decided upon. A small piece of the tumour was also removed for examination. The tumour, examined by Dr. Gombault, was pronounced to be "tubercular or syphilitic, but certainly not epitheliomatous." After an absence of some days the patient reappeared, greatly benefited by the treatment. A laryngoscopic examination showed that the tumour was less and the ulcerations were healing. Later on, all parts resumed their normal appearance, the paralysis of the cord disappeared, and the patient was completely cured.

Dr. GAREL.—*Stereoscopic Photography in the Normal and Pathological Anatomy of the Larynx and Nose.*

The author presented a series of photographs taken in his clinic at the Hôpital de la Croix-Rousse, according to the method of Prof. Donnadieu of Lyons. They were photographed by complete immersion in water. He insisted upon the remarkable relief given by the stereoscope, which gives pictures much superior to those ordinarily obtained, and a remarkable precision in details.

Dr. NATIER presented a case of *Cachexia Strumipriva, with Complete Paralysis of the Right Vocal Cord and Paresis of the Left Vocal Cord, consecutive to Ablation of the Thyroid Gland.*

The patient was a young man of twenty-seven, who first came under observation twelve years previously. At seventeen he had typhoid fever, has always been sensitive at the throat and had slight trouble on deglutition; at twenty he entered the army and became an instructor in gymnastics. During 1890 his neck began to swell, he breathed easily and spoke with ease, but after swallowing, especially soups, he had great trouble and was obliged to make effort, some of the fluid returning through the nose. He entered a hospital in August, 1891, where he was advised to undergo operation. The goître was removed. Immediately after this, swelling of the neck occurred, especially on the right side, and severe attacks of suffocation necessitating tracheotomy. For some days liquid food, which alone he could take, was rejected partially through the canula and the nose. He remained in bed for six weeks, and the first day he attempted to go out he experienced trouble in breathing, and he could only speak in a low voice and in the room. As the symptoms increased he attended the clinic of Dr. Gouguenheim. The laryngeal stenosis being alarming, this physician advised tracheotomy, but in consequence of the patient's refusal administered mercurial peptone injections. Two months later the patient left the clinic without benefit.

At the present moment the patient has a facies characteristic of "cachexia strumipriva." The skin is also dry and yellowish, and the nails are dry and hard. The pulse is slow and small. The patient is emotional, and weeps without reason. His speech is difficult and drawling; words are scanned and emitted slowly. The voice is low. Respiration—and especially inspiration—is troublesome, and causes him the gravest fears. Laryngoscopically the right vocal cord is absolutely immovable and in a median position, from which it does not separate at all. The left vocal cord is simply paretic, but severely so, since in the deepest inspiration it scarcely moves one millimètre, or one and a half millimètres at most. We can only regret that operative interference has had such a deplorable result.

Dr. MOURE, confirming Dr. Natier's laryngoscopic examination, also noticed that the arytenoid region was œdematous, especially on the left side. He does not think that the recurrents have been cut, which would have led to a cadaveric position of the cords. He thought that the recurrents have been involved in the

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cicatricial tissue, which has caused paralysis of the posterior crico-arytenoid muscle. He would insert a canula, and wait further developments.

Dr. MOURE presented *a New Nasal Speculum*. In operating for exploratory puncture of the antrum it is sometimes difficult to withdraw the trocar through the speculum. He has therefore devised a speculum open on the side like a uterine speculum. The ordinary speculum does not open sufficiently at its base, and the author's new instrument is composed of two horizontal cylindrical plates. Good illumination can be obtained, and it can be withdrawn easily. It is meant to replace the speculum of Duplay, commonly used in France.

Dr. GARRIGOU-DESARÈNES described his own speculum, which he has used for ten years.

Dr. MIOT said that bivalve specula had advantages, and permitted a full view of the interior of the nose during the introduction of instruments.

Dr. MOURE said that his new speculum was devised to replace those others, with which we could see perfectly well, but which were inconvenient for certain operations.

REVIEWS.

Maladies de la Bouche et du Pharynx. By Dr. A. RUAULT. Paris: Masson, 1892.

THIS, which forms part of the third volume of the "Traité de Medicine," published under the direction of Drs. Charcot, Bouchard, and Brissaud, is a work such as might have been expected from the reputation of its author. It gives a very complete account of diseases of the mouth and pharynx. The section dealing with diphtheria is especially interesting, comprises no less than 87 pages, is fully up to date, and gives a very complete account of the pathology of this disease.

The author defines diphtheria as a disease caused by a special micro-organism, secreting a poison, which, being absorbed, affects the general system. This specific inflammation gives rise to fibrinous pseudo-membranes, enclosing the specific bacillus. When situated in the pharynx this is *diphtheria;* when in the larynx it is *croup.*

The researches of Klebs, Loeffler, and latterly of Roux and Yersin, are referred to in detail. These latter authors signalized the dependence of the false membranes upon the specific bacillus, the paralyses and other symptoms upon the poison evolved, and the secondary infections upon the micro-organisms which accompany the Klebs bacillus, the streptococcus of Fehleison especially increasing the virulence. A great many researches (Morel, Grancher, Barbier especially) have supplemented those of Roux and Yersin, and suffice to lead to the differentiation of certain clinical forms of the disease, and as indications for prophylaxis. A very complete and carefully written account is given of the etiology and pathogenesis, and precise prophylactic rules are laid down.

Isolation of the patient is not sufficient, but all objects which have

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