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THE TREATMENT OF CATARRHAL DISEASES OF THE UPPER AIR PASSAGES.

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I pray you bear with me if, in the beginning of this paper, I present a matter which may at first seem irrelevant to the subject. My excuse is three-fold: First, that the condition referred to is frequently a cause of nasal and laryngeal disease; second, that it is of frequent occurrence; third, that its importance is often overlooked. I refer in this to the inspiratory collapse of the alæ nasi in persons enjoying fair health—a sucking in of wings of the nose at each inspiration. I say in fair health to distinguish the same phenomenon as it occurs *in extremis*.

The literature on the subject is peculiarly scant. Traube describes a case occurring during pneumonia and one in paralysis ascendans; B. Frankel, in a child suffering from meningitis. In Traube's cases the hinderance to air was so great that he employed a hair pin held in place by means of adhesive plaster to overcome it. Frankel employed an ear speculum. Drayton (*Med. Record*, Dec. 15, 1888) reports a cure in the case of a pupil in vocal culture by means of a cotton pledget and message. Zeim also reports a case. Latterly I am not aware of any additions to the subject, with the exception of the masterly contribution by Mortz Schmidt (*Ueber das Ansaugen der Nasenflügel, Deutsche Medicinischer Wochenschrift*, No. 4, 1892), to whom I owe much of my knowledge of this condition. He accounts for the scant observations on the subject by the fact that we are accustomed to at once introduce the nasal speculum in beginning our examinations without at first observing the alæ of the nose. We have, however, only to request our patients to take a full breath before introducing the speculum to find how frequently this condition, in a greater or less degree, occurs, and that a convergence which furnishes an absolute hinderance to the full respiratory act is not by any means seldom, in which cases the patients express relief if the alæ are simply held outward with the fingers.

The condition is made still worse when there exists at the same time a deviation of the septum cartilagineum. The convergence includes the entire alæ as in facial paralysis, or only the plica vestibuli. The former occurs most frequently in those of a dolichocephalic type, the latter in the brachycephalic.

The cause of this condition is to be found in an atonic condition of the nasal wall from loss of function of the muscoli-dilatores et lavatores alæ nasi. This

weakness is in turn caused by all those long continued conditions which setting in at an early age interfere with nasal respiration, whereby the muscles have not sufficient exercise. Adenoid vegetations are a prominent cause of this.

Now as to the philosophy of this in connection with nasal or laryngeal diseases. We must first understand that the beginning of the respiratory track is at the entrance of the nose and not at the larynx; and that behind every constricted point in the entire track from the entrance of the nose to the finest alveoli there is a rarefaction of air during every inspiration. The degree of rarefaction varies in ratio, to the extent of the constriction and the force of inspiration. The natural effect of this rarefaction is a suction which is exerted upon the blood within the domain of such rarefaction, and which is made manifest to us by a local hyperæmia of the mucous membrane and consequent excessive secretion.

Respiratory convergence of the wings of the nose may give rise to nearly all the phenomena arising from contraction of any other part of the respiratory tract, migraine, aprosexia, asthma, etc. Usually the influence is exerted directly on the mucous membrane of the nose, cavum or pharynx, producing redness, swelling of the mucous membrane, and increased secretion of mucus. Tinnitus aurium is not infrequently caused by congestion of the mucous membrane lining of the cavum, which congestion, if dependent upon convergence of the alæ of the nose, may be relieved by preventing the latter condition. It is true that the conditions of the mucous membrane enumerated may have existed for so long a time that they may require direct treatment, but I have relieved some troublesome cases with swelling of the turbinated bodies accompanied by secretion, headache, etc., by means of the simple but eminently effective instrument which I will now speak about.

The treatment is simple. Schmidt has tried gymnastics of the nasal muscles, but has given it up as unsatisfactory. He has used the Feldbaush tubes for a long time with satisfactory results, but they cause a certain amount of irritation from pressure on the septum. Feldbaush, on the suggestion of Schmidt, has produced the instrument which I hold in my hand and which is quite satisfactory. They are of course made in different sizes to fit different noses. It is held in place by introducing the heads from behind into the pocket at the end of the nose, when the spring is pressed up against the alæ of the nose, the connecting part resting on the septum cutaneum.

Acute Rhinitis.—During the trying weather of the past winter we have had ample opportunity of treating coryza. The symptoms have not varied from the well known ones of slight pyrexia, lassitude, chilliness, frontal headache, blocking up of the nose, with swelling of the mucous membrane, hypersecretion, etc. The treatment which we have

employed has proven most satisfactory. Internally we have given large doses of bromides, or a tablet compounded after the formula of Dr. Lincoln, consisting of camphor, gr. $\frac{1}{4}$, fluid ex. belladonna gr. $\frac{1}{8}$, quin. sulph. gr. $\frac{1}{4}$, one every hour. The local application by means of the cotton carrier of cocaine dissolved in tinct. belladonna in from three to five per cent. solution has been especially useful in immediately relieving the most prominent symptoms, *i.e.*, turgescence of the mucous membrane, frontal headache, and throbbing in the nose. We believe that such treatment shortens the duration of all cases of coryza and in some cases seems really to abort the attack. If there is a predisposition against cocaine we may use tinct. belladonna, alone applied on the cotton carrier. We have not lost sight of the fact that chronic rhinitis in the beginning results from relapsing acute attacks and have retained the patients under observation until the turbinated bodies returned to a normal condition.

For this purpose we have used nearly the same treatment as that employed in simple chronic rhinitis. In this the most prominent position is given to the nasal bath. The ingredients used and the mode of employment are simple and effective. A half teaspoonful of salt and a half teaspoonful of glycerine are dissolved in half a glass of warm water.

Take a teaspoonful of this mixture, rest the point of the spoon on the lower part of the nostril, slowly throw the head backward, saying at the same time a continuous "ah," and allowing the fluid to gently run into the nose. Then incline the head forward and the fluid will run out. Repeat this in each nostril three or more times night and morning. The sodium chloride has a soothing effect upon the mucous membrane; the glycerine a mildly depleting action; the water is cleansing. I have lately had constructed a glass receptacle in the shape of a covered spoon having a spout which facilitates the taking of the bath. Douches are never allowed in any form of simple chronic rhinitis. Not because we believe they are potent in causing disease of the middle ear but because of their local effect on the turbinated bodies. We are convinced that they increase rather than diminish the hyperemia present in simple chronic catarrh and that they aid the hypertrophic process toward which simple chronic rhinitis has always a strong tendency. Very frequently the nasal bath is all the treatment required. In other cases it may be necessary to use sozo iodide of zinc in sugar of milk, $\frac{1}{16}$; this especially in catarrh of the cavum where decomposition of secretion is very liable to occur. Or we may use menthol dissolved in iodine in from two to ten per cent. solution where turgescence and the nervous symptoms predominate, or peroxide of hydrogen when the purulent features are most prominent as is the case especially in the rhinites of children. Thymol is also a most useful agent in certain cases where the discharges are liable to become inspissated. We have almost done away with aqueous sprays in the treatment of nasal diseases because of the mechanical irritation caused by the extreme force with which they strike the parts to be treated, using instead one or the other of the petroleum vehicles.

There has lately been brought before the profession by the chemists, McKesson & Robbins, a preparation of stearic acid and zinc which to my thinking

bids fair to become a valuable addition to our armamentarium. In the manufacture of this new excipient stearic acid, prepared from suet, is used. When a soluble salt of zinc is added to this acid a light mollescent precipitate results resembling in its extreme lightness calcinated magnesia. Various medicinal agents are combined with this powder, such as tannic, boric, salicylic acids, balsam peru, aristol, ichthyol, menthol, and many others. One of the chief advantages of this preparation is its power of adhering to the surface upon which it is placed. Rubbed on the palm of the hand it is absolutely unaffected by the addition of water—the latter acting as quicksilver does, and when poured off not the slightest moisture remains. It is said to remain in place on the urethral mucous membrane for from six to twenty-four hours regardless of the passing secretions. Another important feature is its freedom from the formation of the little balls which has rendered the use of insufflations in the past more harmful than beneficial. Further experience with these preparations must be had before a conclusive opinion may be stated but at present we are most favorably impressed. In the pharyngitis which so often accompanies chronic rhinitis, where the mucous membrane is coated over with a tenaceous, glary layer of partially inspissated mucus, we first cleanse the parts by wiping with a cotton pledget until the secretion is entirely removed; then a five to ten per cent. solution of nitrate of silver is applied by means of a spray. The conditions which were first designated by Schmidt of Frankfort-on-Main, "bilateral pharyngitis," and which is so frequent in singers, is, in our experience, best treated by cauterizing the red granular streaks which stretch up along the lateral pharyngeal walls with mitigated lapis over their entire extent even up into the Rosenmüller's groove if need be. The results of this procedure, especially in vocalists, are often remarkable. The voice is improved and the disagreeable tickling sensation immediately removed. In catarrh of the crypts of Luschka's tonsil the following operation is performed. After thorough cocainization of the palate, pillars, pharynx, and post nasal space, the palate is hooked back by means of a palatal retractor. I am accustomed to the one figured below and which is quite practical. After this the tongue is depressed by a large, short handled mirror and held so that the crypts of the tonsils can be seen in the mirror at the same time that the tongue is being depressed. A probe bent at a proper curvature, and having mitigated lapis fused in its head is then carried up into the crypts of the tonsils which are thoroughly cauterized. In this way much of the dropping of mucus so frequently complained of may be immediately arrested, and which may evade all other modes of treatment.

In hypertrophic rhinitis there is no time lost in any method of treatment other than the cold or electric snare, or the electric cautery. The results of this treatment are so much more satisfactory and permanent than those obtained by the use of chromic acid, acetic acid, etc., that the two methods in our opinion are not to be compared.

In circumscribed anterior hypertrophies the cold or electric snare is used. In the electric snare ordinary piano wire No. 8 is employed instead of platinum. The piano wire has greater mechanical and less electrical resistance and the former point is one of great

practical value in snaring post nasal hypertrophies. When a turbinated body is hypertrophic along its entire length we draw three lines of cauterization from behind forward with the knife shaped point, one above, one below, and one in the middle. I find that the results are much enhanced if the furrows thus burned are then carefully rubbed over with a crystal of trichloreteic acid. The reaction after such an application instead of being more severe, is less, and the relief of obstruction thus obtained instead of lasting for only a year or a year and a half as is often the case when the cautery alone is used, is nearly always permanent.

Atrophic Rhinitis.—It has been my fate, it seems to me, to have to deal with more than my share of this disease. It commenced while at work in Chiari's Clinic in Vienna, when he portioned out to me six cases to be treated by Braun's vibratory massage. Instead of trying to dodge such a fate I have yielded and given the subject a good deal of careful attention. I will be as terse as possible in my description of the treatment which I have found most beneficial. It is an open question in my mind as to whether or not the fears of the douche causing ear trouble is well founded or not. I am aware that we have strong authority for such fears and such ones as Roose, Mackenzie, etc., are not to be ignored. Still, and it may be that my experience has been peculiarly happy, there have come to me no untoward effects from this valuable therapeutic agent, with the one exception of a man who in my presence deliberately turned his head to one side while taking a douch. At least I have my patients who are suffering with foetid rhinitis take a douch once or twice in a day, but only in this disease is it ever used. I have the directions plainly printed on a slip which the patient takes away with him.

First let me digress long enough to say that after thoroughly testing Braun's vibratory massage in the Vienna Clinics I gave the results in a paper which I read last year before this Section. One of my conclusions therein was that to the cleanliness which is so essentially a part of this mode of treatment is due most of the speedy relief of disagreeable symptoms, foetid secretions, etc. Braun claimed that under his method the atrophic turbinated bodies returned to the natural proportions. My experience has not substantiated this latter statement. During the past year I have modified Braun's methods in the following manner: The patient comes to me daily. A piece of absorbent cotton loosely pulled from the roll is torn to a size which will completely but loosely fit the inferior meatus and space included between the middle of the inferior turbinated body and septum. This *dry* cotton is held in the accompanying instrument, and the vibratory movements carried over the inferior, middle and superior turbinated bodies, pharynx (as far as possible), septum and floor of the nose. From three to six pledgets of cotton may be necessary in each nostril to entirely bring away the discharge, scabs, etc. Allow me to accent the fact that the cotton is dry, as I believe this dry method distinctly superior in its results to the moist method as recommended by Braun. This absolute cleanliness cannot be too strongly insisted on. On examination after this massage the mucous membrane looks pink and clean, and the patient often expresses a feeling of comfortable warmth and relief. Immediately afterwards we may use balsam peru, 10 per cent., iodo-glycerine,

thymol in albolene, or any of the many good things recommended for the disease provided they are not too irritating. But I am convinced that the vibratory massage carried forth as above described has a distinct worth, and will shorten the treatment of foetid rhinitis by many months.

I had intended to speak further on the treatment of simple laryngeal inflammation, especially as it occurs in singers, but I fear that I have had more than my share of time.

I have intentionally refrained from speaking of defective septum in connection with rhinitis, as it would lead me into too vast a field,

In conclusion I would say that there are few cases that do not require constitutional treatment,

Rheumatism or the rheumatic diathesis, plethora, scrofula and alcoholism should be carefully watched for and treated according to the well known lines. We cannot cry out too loudly against smoking as a cause in many individuals of disease of the upper air tracts. Especially harmful are cigarettes, because the smoke from them is inhaled and this causes atrophy of the vocal cords. A recent case of this kind vividly brought the effect of cigarette smoke to my notice. An actor after two years of excessive cigarette smoking applied to me for an increasing loss of vocal resonance and timbre with recurring attacks of hoarseness. I found the vocal cords atrophied to two thirds their former size. I had examined them when they were normal.

MENTAL ABERRATION ATTENDING HYPERTROPHIC RHINITIS, WITH SUB-ACUTE OTITIS MEDIA.

Read in the Section of Laryngology and Otology, at the Forty-third annual meeting of the American Medical Association, held at Detroit, Mich., June, 1892.

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Mental aberration attending intra-nasal affections and their sequelæ is considered rare by the profession; yet, it has been the experience and observation of many of the Fellows of the American Rhinological Association, that mental aberration, or insanity *per se*, has appeared upon the existing intra nasal disease, that removal of the latter often causes the former to subside.

Roosa gives, in his valuable books on "Diseases of Ear," a case of insanity and suicide, on account of tinnitus aurium. Experienced rhinologists can recall one or more cases of mental aberration due to intra-nasal disease. In fact, so much importance is attached to disease of the upper air passages, being the *fons et origo*, of mental aberration, that a committee was appointed, consisting of Fellows of the American Rhinological Association to examine inmates of State Insane Asylums, and ascertain the per cent. of patients affected with disease of upper air passages.

While consent has been given by the Superintendents to make the rhino-pharyngoscopic examinations, the committee has not yet reported, owing to the difficulty in getting the insane to submit to the necessary investigation.

It has been the common experience of practical