

and the condition of the tongue, ought to render the differentiation comparatively easy.

**Treatment.**—The superficial form of glossitis requires the same remedies as stomatitis, or it may be safely permitted to pursue its natural course, a suitable regimen being enforced. The deep-seated form requires more energetic handling. When there is much sthenic reaction, the subject being vigorous, leeches should be applied under the angles of the jaws, or free scarifications of the tongue should be practiced. Water, as hot as can be borne, should be held in the mouth as long and as frequently as possible; or ice may be as freely used, if grateful or more beneficial to the patient. Deep incisions may be necessary to evacuate matter, or if swelling threatens the life by asphyxia. Tracheotomy, or probably intubation of the larynx (method of O'Dwyer), may be required in an extreme case. If swallowing be prevented by the swelling, a flexible tube can be passed into the œsophagus through the nares, and nutritive liquids be thus conveyed into the stomach. Support by suitable aliment is required from the beginning, and the use of alcoholic stimulants must be resorted to as soon as the powers of life flag. At the beginning, if there be much reaction, the arterial sedatives—aconite, digitalis, veratrum viride—may be employed; but quinine, antipyrin, phenacetin, or some other antipyretic may be required to check the formation of pus. At the outset, fifteen to twenty grains of quinine and half a grain of morphine should be given to an adult, and subsequently from three to five grains of quinine and one eighth of morphine, every four hours. If swallowing become difficult, the remedies can be administered in solution by enema, the morphine being suspended if there be any indications of stupor from carbonic-acid poisoning.

#### TONSILLITIS.

**Definition.**—By *tonsillitis*, it is intended to express an inflammation of the tonsil. *Quinsy* is commonly used to signify the same disease. Under the term tonsillitis are, however, included several distinct morbid states. Interstitial tonsillitis signifies an inflammation of the connective tissue of the organ; peritonsillitis, of the subjacent connective tissue; and follicular tonsillitis, of the crypts or follicles. The first two are apt to cause suppuration—the last named, to cause ulceration.

**Cause.**—A relationship has been supposed to exist between the ovaries and tonsils, but it is by no means well defined. Dr. James (London) first mentioned the coincidence of ovarian irritation with inflammation of the tonsils; afterward, Dr. Echeverria, of New York, made the same statement; and recently, Dr. Penrose, of Philadelphia, has connected impotence with the ablation of the tonsils. The rachitic and strumous diatheses and heredity are important factors in the eti-

ology. Those having chronic hypertrophy are peculiarly liable to acute attacks terminating in suppuration. Such are predisposing causes. The most usual exciting causes are climatic changes—exposure to draughts of cold air, the body in a heated and perspiring state, sudden variations in temperature, etc. Follicular tonsillitis with ulceration—ulcerated sore throat—is usually preceded by disorders of digestion, and is apparently dependent on such derangements for its origin. An individual susceptibility to attacks undoubtedly exists, and those who have had them are more liable. Such subjects have seizures every winter, especially if the temperature changes are frequent and the atmosphere damp. Period in life is not without influence. Tonsillitis is rare in infancy and in old age, and occurs most frequently from the second dentition to the thirtieth year. Both sexes are liable, and probably in an equal degree, although males are attacked more frequently because more exposed to the exciting causes.

**Pathological Anatomy.**—The tonsils consist of a bunch of mucous follicles, held together by connective tissue, and are imbedded in a quantity of fatty and areolar tissue. A morbid process may affect the follicles or crypts, the interstitial tissue, or the subjacent tissue. In acute inflammation, there are intense hyperæmia, redness and swelling of one or both tonsils, and of the palate and uvula. The swelling may be so considerable that the tonsils, meeting in the median line, press aside the pendulum and fill out the cavity of the pharynx. The secretion of the follicles consists of a soft, yellowish, puriform material, which is shown under the microscope to be composed of cast-off epithelium, mucus, and fatty detritus. The connective-tissue corpuscles undergo proliferation, and abundant leucocytes, with some red corpuscles, float in the serum which fills the interstices. Multiplication of the cellular elements finally is sufficient to constitute a purulent collection, which tends to external discharge by gradual softening of the superimposed tissues. When the inflammation occurs in the connective tissue beneath and around the tonsil, the same process takes place, the tonsil participates more or less in the hyperæmia, but it is pushed upward and rather backward by the swelling beneath. When pus forms, it tends to burrow downward to the base of the tongue and under the corresponding pillar of the fauces, which is pushed forward. In the follicular form the hyperæmia is more especially exhibited in the network of vessels surrounding the follicles. The epithelium becomes cloudy from granular degeneration, and is detached. Disintegration of the basement membrane occurs, and thus an ulceration is established. The grayish slough, so long as it remains adherent, bears a superficial resemblance to a diphtheritic membrane, and the two processes are often confounded. Tonsils that have been amputated, leaving behind considerable hypertrophied tissue, are worse in respect to the results of any subsequent inflammation, than the organ in its natu-

ral state. The cicatricial tissue is tense, resisting, and hence prevents the escape of pus, or at least impedes its upward extension and ultimate discharge in that direction. The consequence of this state of affairs is the dissection of the pus, downward from the inflamed part, but especially into the base of the tongue.

**Symptoms.**—A feeling of general *malaise*, aching of the back and limbs, and some chilliness, usually precede the local manifestations in the fauces. These are the well-known disturbances incident to "taking cold." The ulcerative form of tonsillitis is preceded, as a rule, by stomachal distress, by indigestion, acid eructations, etc., and these symptoms are accompanied by an unaccountable languor and debility. The chilliness is followed by fever, which may consist in a very slight elevation of the body-heat ( $99.5^{\circ}$  to  $100^{\circ}$  Fahr.), or may attain to a more formidable reaction, the temperature rising to  $102^{\circ}$ ,  $103^{\circ}$ , or even in children to  $105^{\circ}$  Fahr. Soon after the appearance of these constitutional symptoms, or coincidently with them, uneasiness is felt in the fauces—a sense of heat and irritation—and difficulty, with soreness, is experienced in swallowing. These sensations increase and are constant, and meanwhile paroxysms of acute pain in the fauces, shooting through into the ear, occur spontaneously, or are excited by the effort to swallow. Frequent attempts to swallow are induced by the presence in the fauces of a viscid mucus, which constantly accumulates, and by the enlarging tonsils, which have the effect of an alimentary bolus ready to be grasped by the pharynx. When the attempt to swallow is made, the muscles of the face are contorted, strong efforts of the pharyngeal and cervical muscles are put forth, a burning sensation is felt in the fauces, together with an acute pain which penetrates to the ear, tears come into the eyes, and, with a groan or cry, the act is finally accomplished, a part of the liquid it may be coming back through the nose. In the more severe cases, when both tonsils are affected, the act of deglutition becomes impossible, but usually the severe distress awakened by the effort prevents the attempt, which, if persevered in, may be accomplished in part. Instead of attempting to swallow, the patient tries, by frequent hawking and spitting, to clear the throat of the mucus which accumulates. The voice has a muffled, nasal tone, and words are with difficulty distinguished, or may indeed be entirely unintelligible. Hearing becomes dull, owing to the encroachment of the swollen tonsils on the Eustachian tubes, and noises of various kinds sound in the ears. The breathing is more frequent and less deep than in health, and may, indeed, become labored, inspiration being slow and difficult, if the swelling extend to the aryteno-epiglottic ligaments, or if œdema of the glottis should come on. If the lesions are confined to the tonsils, together with increased frequency and great shallowness of breathing, there are usually paroxysms of suffocative sensations of brief duration and purely subjective.

On inspection, the fauces are seen to be red about the inflamed tonsil, or, if both are affected, the tonsils, palate, and uvula are red and swollen, the redness terminating rather abruptly at the margin of the hard palate. The follicles are swollen. The tonsils, in the beginning of the inflammation, are deeply red, hyperæmic, and prominent, their follicles containing a purulent-looking, semi-solid secretion, which may be mistaken for a membranous exudation. As the swelling increases, the palate and the anterior pillars of the fauces are pushed forward, and the tonsils, if both are affected, meet in the median line. It is in the strumous subject, and in the case of those who have had repeated attacks of the disease, and have acquired a habit, as it were, that both tonsils are simultaneously inflamed. Peritonsillitis, or inflammation of the subjacent connective tissue, is usually—invariably in my experience—unilateral. The swelling lies under and largely in front of the tonsil, and may be felt by the finger as a hard, brawny mass, extending to and embracing the corresponding portion of the base of the tongue. The tonsil, also, participates to some extent in the inflammation, but the formation of pus takes place in the adjacent tissue. This form of tonsillitis usually occurs in those who have suffered amputation of the tonsil. It is tedious, painful, and sometimes dangerous to life, by the pus dissecting down beneath the aryteno-epiglottic folds, or by the sudden occurrence of œdema of the glottis. In cases of tonsillitis of any severity, the neighboring lymphatic glands enlarge, are tender, and the connective tissue about them becomes œdematous. In this way considerable swelling of the neck externally takes place; when one tonsil only is affected, confined to the corresponding side, and, when both are attacked, the swelling is general. In this way it happens that the movements of the head and neck are constrained and painful. The tongue is usually heavily coated, and the breath fetid, especially in ulcerated tonsils. In this affection also, doubtless owing to the accompanying gastric derangement, there is much debility—out of proportion, certainly, to the local morbid process—and it is not attended by the sthenic reaction which accompanies the other form.

**Course, Duration, and Termination.**—With the progress of the case much suffering is experienced. But little food or drink, sometimes none, can be taken during the time of maximum swelling, which may continue for two or three days. Rigors, not pronounced, or rather slight chilliness announce the suppuration. On inspection now, a change in the color of the swollen parts may be seen. Instead of a deep redness all over the inflamed area, there may be a circumscribed yellowish spot, at the summit of a prominence in the tonsil, or beneath the tonsil at the base of the anterior pillar of the fauces. Fluctuation may be detected in these places by the finger, passed carefully over the base of the tongue, and two fingers of the other hand resting in the fossa behind the angle of the jaw. This manœuvre is especially adapted to

detect fluctuation in cases of peritonsillitis. When suppuration occurs, which is the rule in interstitial and peritonsillitis, the height of the disease is reached in about seven days. Sometimes there is a sudden termination to days and nights of agony by the escape of a large quantity of pus, spontaneously or by incision. The opening may occur in sleep and the pus be swallowed, and the agreeable change in the condition felt on awaking may not be explained. In some cases a number of days may be occupied in the escape of matter by several orifices, the improvement in the patient's state developing gradually. By slow progress in the formation of matter and by its gradual discharge, the duration of the case may extend to two weeks. After the evacuation of pus, rapid improvement takes place. Food can now be swallowed and rest obtained; the fever ceases, and the cavity of the abscess closes. Sometimes resolution takes place without proceeding to suppuration; then the progress of the case is slow, hyperplasia of the connective tissue occurs, and the organ remains permanently enlarged. Successive attacks of inflammation, of a rather subacute type, is the chief factor in the development of chronic hypertrophy. The termination is rather fatal. Œdema of the glottis has caused death. The case of W. J. Wade, as described by the author; also the case of Mr. Rice, Minister to Russia, who was taken when about to sail from New York (May, 1889). A large abscess developing in the course of an acute infectious disease may decide the case unfavorably. Death has been caused mechanically by the epiglottis being forced down by the swelling so as to close the entrance to the larynx, but this is an exceedingly rare event. The duration of follicular tonsillitis is about a week to ten days. The ulcers may be single or multiple, and a large excavation may be produced by the coalescence of several small ones. When the slough is detached, the process of healing goes on rapidly, and the tonsil is more or less changed in form and structure by the new material and its subsequent contraction. Considerable loss of substance may be caused by the sloughing.

**Diagnosis.**—As every step in the morbid process can be seen, there need be no difficulty in determining the character of the malady. It may not be easy to differentiate between peritonsillitis and interstitial tonsillitis, but, as suppuration is the objective point in both, it is of little consequence to be absolutely accurate. Ulcerative tonsillitis, with slough attached, may be confounded with diphtheria. The distinction is made by observing that the apparent membrane is confined to the tonsil and to its follicles, and does not extend to the palate and other parts.

**Treatment.**—A saline laxative should inaugurate the treatment unless the bowels are relaxed. Tincture of aconite-root (gtt i—ii) may be given every hour or two for the period preceding pus-formation. Tincture of veratrum viride may be employed in the same way,

and with the same limitation, but it is less efficient. Tartar emetic in small doses ( $\frac{1}{16}$  gr.) frequently, is also an efficient antipyretic, but, as it is apt to nauseate, the effects are unpleasant.

There can be little doubt now that an antipyretic dose of calomel (grs. iij—v) has a good effect on the morbid process in all directions, and is superior to all other remedies at the onset. Its subsequent use in a similar dose, depends on the state of the fever, the condition of the fauces, and the absence of suppuration. When pus forms, quinine becomes the better agent, and this must also be exhibited in sufficient quantity to make an impression on the local trouble. When an abscess has formed, it is useless to try to change the temperature; then the chief point is to evacuate it as safely and speedily as may be. If the vital powers be depressed, and especially if the pus dissects deeply and causes threatening symptoms, iodide of iron becomes a valuable remedy, and may be given in form of pill or syrup. The author can not approve of the rather reckless administration of potassic chlorate, now so much in vogue, for these reasons: it has no curative effect in these cases, it is a poison to the heart, and it has a very deleterious action on the renal structures. Antipyrin, antifebrin (acetanilid) are more useful than potassic chlorate, and not hurtful in their present or future effects, if used with judgment.

I must caution my readers against the administration of opium or its alkaloids, for when their anodyne and soporific effects are experienced, and deep sleep comes on, fatal œdema of the larynx may occur.

The local treatment may be rather more important than the systemic. If there be much tumefaction of the neck, great relief is afforded by a hot or cold wet pack. A gargle of hot milk and water, used every few minutes, is an efficient means of lessening the inflammation and swelling. Sometimes ice and cold water are more grateful, when they may be used instead. Bicarbonate of sodium, in powder, placed on the base of the tongue, or a solution, in the form of a gargle, gives great relief, it is said, in cases of acute tonsillitis. When suppuration occurs, warm applications are to be preferred. If the tonsils come in contact in the median line and swallowing becomes impossible, great relief to the tension may be effected by scarifications of the surface of the swollen bodies, and the bleeding encouraged by gargling with tepid water. When the formation of pus is rendered certain by the change in the color of the pointing part and by fluctuation, an incision should be made to evacuate the matter.

Guaiacum has long been celebrated for its power to arrest tonsillar inflammation. It should be given early, in scruple doses, for, if suppuration have occurred, no remedy but to secure the discharge of matter will be of any service. Another remedy supposed to have specific powers is ergot. The fluid extract may be given internally and applied locally undiluted. Also a curative action, which has, apparently,

an element of specificity, is had from mercury—calomel and hydrargyrum cum creta. These agents must be used with caution, especially if calomel was administered at the outset.

#### GANGRENE OF THE MOUTH—NOMA.

**Causes.**—Gangrene is a result in some cases of stomatitis; but these are not, properly speaking, cases of noma, which is a special disease, and occurs as an independent affection. It is a disease of early life—from three to five—and attacks the child of squalid poverty, or those living under the most unfavorable hygienic conditions. It is sometimes an accident of the incautious use of mercurials in unhealthy subjects.

**Morbid Anatomy and Symptoms.**—The inner face of the cheeks, more usually of the left side, is the favorite site of the gangrenous process. At first a deep-violet or purple spot appears, surmounted by a vesicle full of bloody serum. Softening and destruction of the tissues take place, producing a quantity of sanies and detritus. Large excavations are thus formed, which widen as the destruction proceeds. A horrid stench is emitted from the decomposing mass. The jaws are eroded, the teeth loosened, and the lips invaded. Thromboses close the veins, but the arteries remain permeable; the nerves are stained black, but are not otherwise altered in structure. If a cure is effected, very great deformities may result in the process of cicatrization, and the functions of the parts be seriously impaired.

Usually this disease begins silently and is painless, and hence escapes detection until the appearance of a grayish-black mass attracts attention to the mouth. When fairly inaugurated, the disease extends so rapidly that distinctive symptoms are produced. A pronounced odor of animal decomposition is exhaled with the breath; the lips and cheeks become swollen and œdematous; the sublingual and submaxillary glands enlarge; sanies and bloody saliva, mixed with the gangrenous and decomposing materials cast off from the sloughing ulcer within, are constantly flowing from the mouth. Marbling of the dirty, wax-colored skin with purplish, vein-like lines, and a central dark spot of commencing decomposition, indicate the outward extension of the gangrene to the cheek.

As already indicated, during the first few days of the disease only local symptoms are present; but then auto-infection ensues by reason of the absorption of the gangrenous materials, and an adynamic state is produced. Then the appetite is lost, nausea and vomiting occur, and a fetid diarrhœa supervenes. The strength fails rapidly, the pulse becomes small and weak, and low muttering or merely nocturnal delirium comes on.

**Course, Duration, and Termination.**—The course and duration of the malady vary with the age, the vigor of constitution, and the hy-

giene. The gangrenous eschar on the cheek usually forms within the first week, and death may occur by exhaustion at the end of the second week; or the patient may be cut off by an intercurrent malady, notably pneumonia, at an earlier period. Pursuing its ordinary course, without complications, death may result from septicæmia in two weeks. When recovery takes place, the convalescence will be rapid or tedious, according to the amount of tissue to be repaired, and, even after the arrest of the gangrene, the powers of life may be exhausted by the extensive and protracted suppuration. The mortality is great, and ranges from sixty to seventy per cent.

**Diagnosis.**—Noma is to be distinguished from malignant ulcer, and from ulcerous stomatitis. Malignant ulcer begins on the lip; noma on the mucous membrane within. The former is an ulcer covered with an ash-gray slough; the latter is a mass of blackish, gangrenous, decomposing tissues. The ulcero-membranous stomatitis consists of a number of small, round ulcers, at various points, that do not become gangrenous, and heal readily on appropriate treatment.

**Treatment.**—Support to the powers of life is the main point, and this includes not only aliment but air-space. Alcoholic stimulants must be used early and freely. Quinine in full doses, and opium cautiously, should be given with the view to arrest the spread of the gangrene, and to prevent septicæmic infection. If administered at an early period, belladonna seems to possess the power to prevent the spread of the gangrene. It is very important to destroy the first sloughing tissue by active caustics, as Vienna paste, chromic acid, zinc chloride, muriatic acid, etc. The caustic must be so applied as to destroy a small extent of surrounding healthy tissue. Other efficient topical measures are resorcin, applied freely by insufflation after the separation of sloughs; turpentine, conjoined with its internal administration, and compound solution of bromine (bromine, ʒ i; potassium bromide, ʒ ij; water, ʒ j).

#### CATARRHAL INFLAMMATION OF THE NASO-PHARYNGEAL MUCOUS MEMBRANE.

**Definition.**—The upper pharynx, into which the posterior nares enter, is the seat of this inflammation. It may be acute or chronic.

**Causes.**—Inflammation of the naso-pharyngeal space is usually a part of an inflammation involving the posterior nares and the lower pharynx. The most prolific cause is taking cold. Next to this is the use of cigarettes, especially if the smoke is inhaled and ejected by the nares; and then comes alcoholic excess, but little less important. Diphtheria, the eruptive fevers, and inflammatory affections of the air-passages, are accompanied by this disease, and it may succeed them.

**Pathological Anatomy.**—An intense hyperæmia—a vivid redness—is the first change, but in chronic cases the color of the membrane is reddish-brown. As a result of the congestion, hæmorrhagic extravasations may occur. The mucous membrane is swollen, infiltrated, and projecting from the general surface are numerous enlarged follicles. The increase in size of the follicles is due largely to the increase and accumulation of their cellular contents. The pharyngeal tonsils are enlarged from the swelling of the mucous membrane, and the orifices of the Eustachian tubes are changed in form by the same cause, or even obstructed. A quantity of glairy, tenacious mucus is poured out, and coats the surface of the membrane. In chronic cases, the mucous membrane is much altered by the enlarged and tortuous veins, by hæmorrhagic extravasation, and by the hypertrophic enlargements of the follicles. In very old cases the mucous membrane undergoes atrophy. There is also increased secretion; the mucus is mixed with pus, and not unfrequently with blood, and a thick string of muco-pus can often be seen projecting down into the lower pharynx, behind the soft palate. Erosions of the epithelium also take place, and superficial ulcers form.

**Symptoms.**—There is at first, in acute cases, an unpleasant, stuffy, and dry feeling in the naso-pharyngeal space, followed in a short time by increase of secretion falling into the pharynx or discharging by the anterior nares. There may be some headache and pains in the upper jaws. Breathing through the nose is difficult. The voice is thick and nasal. The symptoms of an acute attack subside in a few days, the secretion changing to a yellow muco-pus from the transparent, glairy mucus which first appeared, breathing through the nose becoming natural, and the voice assuming its normal tone.

In the chronic form, the symptoms succeed to the acute or develop slowly from the causes continuously acting. The posterior nares are more or less obstructed, constantly to a slight extent by the swelling of the mucous membrane, and occasionally very much by accumulation of mucus. Breathing through the nose may be sometimes prevented. The voice is more or less thick and nasal. Pain in the ear may be felt, and dullness of hearing is a common symptom from obstruction of the Eustachian tube. The mucus, hanging down into the lower pharynx, excites frequent attempts to swallow, and causes a feeling of the presence of a foreign body. A disagreeable habit of hawking is induced in this way. In very chronic cases with atrophy of the mucous membrane, secretion ceases, and the membrane has a dry and glazed appearance.

**Course, Duration, and Termination.**—The course of the acute form is short, and the termination is in health, or in the chronic form. The chronic form is very slow, and is usually regarded of importance only when a thick band of mucus hangs into the lower pharynx, and excites efforts to clear the throat. As a not infrequent cause of deafness

it comes under the observation of the aural surgeon. Although curable under appropriate management, the treatment is very protracted. As success in the treatment requires abstention from the two prevalent habits of smoking and drinking spirituous liquors, success will depend on the conduct of the patient very largely. Left to itself, the duration is indefinite.

**Treatment.**—The first step in the treatment is to free the mucous membrane from the viscid discharge. This is best accomplished by washing out the cavity with the post-nasal syringe, employing a solution of common salt or carbonate of sodium ( $\text{Dj} - \text{iv}$ ). The syringe is passed behind the veil of the palate, the fluid discharged, when, the patient leaning forward, it escapes into a vessel placed to receive it. So much damage to the ear has resulted from the incautious use of the nasal douche, that the author advises the curved post-nasal syringe for the purpose just indicated. A principle of great importance is to avoid such frequent application of a topical remedy as will add each time something to an existing irritation. To be effective, the remedy must make an impression, but this action should cease before making another impression. Whether solid, liquid, or gaseous remedy be used the same principles should govern.

Of the gaseous or aëriiform remedies none is so curative as ethyl-iodide, which can be inhaled without apparatus. It can be vaporized at  $100^{\circ}$  Fahr., and the simplest appliances will suffice; the one point is to inhale the vapor slowly and persistently, carrying it through the nose and naso-pharynx until some heat and sense of irritation occur. When the increased discharge of mucus caused by it subsides, another dose can be inhaled. Usually one inhalation a day suffices, or it may be better to inhale it on alternate days, or even twice each day. The author advises a patient and persevering application of the remedy—for his experience justifies him in saying that admirable results may be thus accomplished.

Bromine has been used with success as the author has seen, but its odor is abominable, and its local oxidizing and destructive action is great. If used with caution, i. e., properly diluted with air, its curative power is great.

Many of the best throat specialists find finely divided powders, administered by insufflation, the most effective of the various modes of topical treatment. *Iodoform* of itself, *tannin* of itself, and the two in combination, reduced to the minutest state of subdivision, are the most useful, as a rule. By an insufflator the powder is blown on and over the affected area in sufficient quantity to excite some sense of irritation. The repetition of the application depends on the subsidence of the impression immediately preceding. As iodoform is so disagreeable, iodol may be substituted, and the usual topical applications formerly in vogue the practitioner may advantageously supplant

by bismuth, salicylate of bismuth, naphthol, acetanilid, asepsin, and the numerous new antiseptic remedies.

#### CATARRHAL INFLAMMATION OF THE LOWER PHARYNX.

**Pathogeny and Symptoms.**—This may be acute or chronic. Both forms arise under precisely the same conditions as the corresponding maladies of the naso-pharyngeal space. The changes in the acute form consist of redness, swelling of the mucous membrane, enlargement of the follicles from accumulation of their contents, and increased secretion, coming on after a very brief dry stage. These anatomical conditions are not limited to the pharynx. In the chronic form, the changes are more decided. The mucous membrane is of a deep reddish-brown, or, in very old cases, grayish. The vessels of the mucous membrane are enlarged and tortuous. The follicles are enlarged and prominent, and have a grayish or reddish-gray color; there may be considerable development in places of the squamous epithelium, and ulcers, rather shallow than deep, form in various situations. The symptoms are by no means pronounced. Dryness, a sense of heat and irritation, a feeling as if something were adherent to the mucous membrane, much hawking and clearing the throat, are the chief sensations. On inspection of the fauces the mucous membrane is seen to be of a deep, reddish-brown color, thick, coated with a tenacious mucus, and roughened by enlarged follicles. In very old cases the posterior wall of the pharynx is smooth, thin, and glazed, in consequence of atrophic changes succeeding to the inflammatory, and has adherent to it dry masses of mucus, colored by dust.

**Treatment.**—The principles and the methods of practice advised for the naso-pharyngeal space are equally applicable here.

#### RETRO-PHARYNGEAL ABSCESS.

**Definition.**—By this term is meant an accumulation of pus in the submucous connective tissue, posterior to the pharyngeal wall. An abscess may form in the mucous membrane itself—this is entitled pharyngeal abscess.

**Causes.**—Diseases of the cervical vertebra, of the atlas and axis, as caries, are the principal causes. Large collections are formed in the same situation, from suppuration in the bronchial glands, and in the deep cervical lymphatics—the pus dissecting up under the mucous membrane, and pointing in the pharynx. Again, an abscess may be the result of an inflammation of the loose connective tissue, under the pharyngeal mucous membrane, a disease not infrequent in children before the tenth year.

**Symptoms.**—The abscess produced by an acute inflammation of the connective tissue is very acute in its course. It begins with chill, high

fever, sleeplessness, intense restlessness, and in very young children there may be convulsions. When the abscess results from caries of the vertebra, its march is slower, and the symptoms of pharyngeal obstruction are the first to call attention to this part. Pain in moving the head is felt, and hence it assumes a fixed position, the cervical muscles being rigid. Then difficulty of swallowing and dyspnoea come on. If digital exploration is then made by passing the index-finger gently over the base of the tongue, a hard, brawny, possibly fluctuating swelling may be detected in the pharynx. The neck will also be much swollen externally, and fluctuation may ultimately be felt under the angle of the jaw. Suppuration is often announced by the occurrence of a chill, and the fever will then assume an intermittent or remittent type, and profuse sweats will occur. The abscess, if not interfered with by art, will discharge spontaneously into the lower pharynx, or externally, or form fistulous communication with the cavity. The author has seen one case in an adult, which extended from the basilar process to the root of the lungs. When spontaneous opening of the abscess takes place, suffocation may be caused by escape of the matter into the larynx. Death may also be caused by the size of the collection, the larynx being occluded, or by secondary disease of the air-passages, or by thrombosis of the transverse sinus, or jugular vein, or even of the carotid artery.

**Course, Duration, and Termination.**—There are great differences, according to the origin of the abscess, in the course pursued. Those due to caries of the vertebra are slow in development, but fatal in result. The phlegmonous abscess is acute, pursues its course in from five to twenty days or longer, and the danger is determined by the size of the collection, and the direction taken by the pus if not spontaneously evacuated. If not large, the abscess will discharge and heal without danger to life. The large submucous abscess will almost always prove fatal by exhaustion.

**Treatment.**—Pus should be evacuated at the earliest moment. The powers of life must be sustained by proper aliment and the free use of stimulants. The formation and spread of pus must be limited by the administration of quinine, as far as such a result is possible, and by calcium sulphide, malt extract, the hypophosphites, phosphates, etc.

### DISEASES OF THE ŒSOPHAGUS.

#### CATARRH OF THE ŒSOPHAGUS—ŒSOPHAGITIS.

**Causes.**—Acute Œsophagitis exists only as a part of a morbid process involving the mouth, fauces, and stomach. Typical examples are afforded by the action of irritant poisons and corrosive substances.