

eating and imperfect mastication he removes the principal cause of acquired pharyngeal pouches, for it is the forcing of boluses of food through the cavity that distends the mucous coat of the pharynx and pushes the membrane between the fibres of its muscular tunic. After a meal during which ingesta enter the pouch he should manipulate the distended sac with his fingers until it is emptied, and he may even be able to wash it out by means of a properly curved syringe. By this means the fermentation and decomposition of retained food may be prevented.

When the diverticulum is situated at the side of the neck the patient may be able to prevent it from filling if he will press upon it with his fingers, or if a compress be worn over it at meal time. If these means do not suffice, and if the symptoms become urgent, it may become necessary to resort to an operation.

Operative Treatment.—The simplest and most promising measure of this nature consists in the application of the electric cautery to the periphery of the pharyngeal mouth of the sac. Cocaine should first be applied to the field of operation, the surgeon being careful to observe the precautions already mentioned. After this preparation for the adhesion of the adjacent borders of the pouch rectal alimentation is resorted to for a few days. In certain cases it may be necessary to operate after the methods employed in pharyngotomy or œsophagotomy, suturing the edges of the divided mucous membrane to hasten recovery and insure the subsequent integrity of the pharyngeal cavity.

II. NEW GROWTHS.

Neoplasms of the pharynx will be considered under the following classification:

1. <i>Epiblastic and hypoblastic.</i>	2. <i>Mesoblastic.</i>
Papilloma	Fibroma
Adenoma	Lipoma
Cystoma	Angioma
Carcinoma	Sarcoma

Fortunately the pharynx is not so often the seat of neoplasms as are the nose and some other areas; but when growths do occur in the pharynx they give rise to warranted apprehension, even if they are of a benign nature, since, as Virchow has observed, they may take on a malignant character. More particularly is this true of tumors situated, as these are, in a passageway which renders them subject to frequently repeated disturbances and irritation. A still further important consideration is the hindrance which they may cause to the acts of swallowing and breathing, and the consequent impairment of nutrition and deficient oxygenation of the blood. To these genuine reasons of anxiety may be added the tendency to recurring attacks of inflammation to which these growths predispose the subject, and the proneness of the inflammatory process to invade the larynx and lungs.

PAPILLOMA.—This is an epithelial tumor of a benign character, which occurs less frequently in the pharynx than in the larynx and mouth. The structure consists of epithelial cells, with a framework of connective tissue beneath the epithelial proliferation. Within this tissue, and separated from it by the membrana propria, is the vascular area. What has been said relative to the transformation of innocent tumors into malignant ones applies with especial appropriateness to papillomata, since no other growths are so likely as these to undergo degeneration. Add to this fact the exposed situation in the pharynx and the frequently repeated irritation to which their location subjects them, and all of the conditions favor their malignant transformation. Aside from the pillars of the fauces and the tonsils, the most common location of papillomata in the pharynx is the posterior wall. They vary in size from a hempseed to a cherry.

The *diagnosis* of pharyngeal papilloma ordinarily presents little or no difficulty, particularly when no inflammatory process is present. But since they are often as-

sociated with an inflammatory condition, or follow it, in such cases there is room for doubt. Then a section should be taken from the base of the tumor, or tumors if they are multiple; for a microscopic examination. The growths have a warty or cauliflower shape, and are of a pale pink or gray color when not made red by irritation or inflammation. Their glistening appearance is due to the reflection of light from the secretions which moisten their surface.

Unless they attain to a considerable size they do not provoke any symptoms sufficiently marked to call attention to their presence, such as a sense of a foreign body in the throat, or impeded deglutition or respiration.

The *prognosis* of papillomata of the pharynx is favorable, provided that they do not undergo a transformation into carcinomata or sarcomata. They rarely become larger than a small-sized grape, and so long as they remain of an innocent nature no suffering is experienced.

Treatment.—Treatment consists in extirpation and cauterization of the seat of attachment. This is best effected by means of the electric cautery, which accomplishes both purposes at the same time. Or the tumor may be severed close to the surface from which it springs, by means of the scissors, knife, or the cold snare; but the base should be well cauterized afterward either with the electrode, or the silver nitrate, or one of the other chemical caustics, in order to lessen the likelihood of a regeneration or degeneration of any tumor tissue which may remain.

ADENOMA.—True adenoma does not occur in the pharynx proper. Adenoid vegetations in the nasopharynx are discussed under the heading of *Tonsils*.

CYSTOMA.—The true cystic tumor, or that in which the wall of the cyst is produced from a matrix of embryonic cells, and the products of tissue proliferation of the cells lining the cyst wall constitute the contents of the sac, is rarely, if ever, met with in the pharynx. Retention cysts, however, occur as the result of an inflammatory process, which causes a stenosis or closure of the duct leading from a gland, with the result of distending the duct, as the glandular secretions accumulate behind the stricture until the consequent tumefaction becomes apparent. The continued accumulation of the contents of the sac causes sufficient pressure on its walls to account for the degeneration of its epithelial lining and for the atrophy which is present in the attenuated membrane. These cysts are generally found in adult life, or in those who have passed the meridian of life.

Treatment.—A simple and effective method consists in opening the sac and destroying its walls. This may be accomplished by an electrode, which serves the double purpose of dividing the wall and destroying the cyst after the contents escape. Or the opening may be made with a knife, after which the walls of the sac are destroyed by a curette. Then the parts had best be treated with tincture of iodine or a ten-per-cent. solution of silver nitrate.

CARCINOMA.—When cancer exists in the pharynx proper it is generally either secondary to the same affection of adjacent tissues, such as the tonsils, the soft palate, the œsophagus, or the larynx, or it is associated with such an affection; and as diseases of these structures are considered in other sections, in order to avoid repetition the reader is referred to their proper headings.

FIBROMA.—Fibromata are found in various parts of the pharynx, but they are more common to the nasal portion than to the oral division of the cavity; and they more frequently spring from the basilar process of the occipital bone. A fibroma is a representative tumor of the mesoblastic type. Like the submucous tissue from which it takes its origin it is a connective-tissue growth, and is the offspring of a highly vascular area. It is made up of mature fibrous tissue from a matrix of fibroblasts. The growth of this neoplasm is always slow, and frequently there is a tendency toward a myxomatous degeneration, or it may undergo transition into a sarcoma. As it is most often seen in the superior portion of the pharynx it is pear-shaped (Fig. 3804), but it may be sessile, and it is a product of youth rather than of old age,

for it is rarely encountered above the age of thirty or forty years.

The *symptoms* referable to pharyngeal fibromata are determined by the position and size of the tumors. Located in the upper or nasal portion of the pharynx they interfere with nasal respiration and impair the resonance of the voice. They sometimes attain to enormous proportions, extending forward into the nasal fossa, crowding forward the nasal and orbital bones, protruding and separating widely the eyes so as to constitute the unsightly deformity known as "frog face," and giving rise to persistent headache. Extension of the growth upward causes encroachment on the cranial cavity, evoking cerebral symptoms. If the direction of the tumor is principally downward it

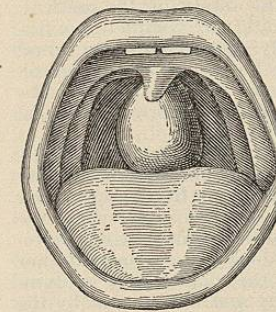


FIG. 3804.—Fibroma of the Pharynx.

causes frequent efforts to swallow, and it may produce sufficient pressure on the soft palate to impede its movements in speech and deglutition. When it reaches the aperture of the larynx it may even threaten suffocation. Mouth-breathing is a prominent symptom, and hemorrhages frequently occur as the tumors are exceedingly vascular. Impaired respiration, mental torpor, and "thick speech" characterize large growths; and when pressure is produced on the orifices of the Eustachian tubes, the proper ventilation of the middle ears is interfered with and the hearing becomes defective. A copious muco-purulent discharge is sometimes present.

The *diagnosis* of fibromata is not attended with serious difficulties. Their occurrence in young persons and their slow growth are characteristic. From mucous polypi they are recognized by their firm, dense substance. They are distinguished from adenoid growths in the vault of the pharynx by the soft, spongy, lobulated appearance of the latter and their occurrence in the very young only. Fibromata are dense, smooth, and of a dark red color.

Prognosis.—It should not be forgotten that, as Virchow says, "fibroma only needs an increase in the size of its cells and a diminution of the cement substance to change it into a sarcoma." The location of a fibroma in the pharynx subjects it to a great amount of irritation; hence it is thereby predisposed to a degenerative transition into a sarcoma and to attain to large dimensions. Unless the growth can be removed, or unless its development can be repressed until the patient has passed his twenty-fifth year, the prognosis is grave.

Treatment.—Curative results have been claimed by numerous writers from injections of alcohol, caustic potash, chloride of zinc, dilute acetic or hydrochloric acid, etc., into new growths. It is asserted that if alcohol will produce contraction and atrophy of tissues, as occur in the cirrhotic liver of the inebriate, it will have a similar effect on a neoplasm, into the parenchyma of which it might be injected. While some observers believe that the curative effect is produced, when the alcohol is injected into the interior of the tumor, by causing the formation of new connective tissue, with the obliteration of blood-vessels, lymphatics, and the parenchyma, others inject it into the circumference, maintaining that the new connective-tissue formation, girdling the periphery of the growth, will choke the afferent and efferent blood-vessels, cut off nutrition, and thus cause atrophy.

Electrolysis is especially indicated for growths having a sessile formation, which precludes the use of torsion or the snare. For this purpose a strong current is employed under general anæsthesia. Much has been claimed for the method of introducing medications with the electric current, or cataphoresis; but

whenever it is practicable to remove the tumor in its entirety, this procedure should be preferred.

Operations.—There are several methods of operating from which to choose according to the size and situation of any given tumor. However, before detaching the growth it should be secured by passing a strong thread through it, in order to prevent it from falling into the laryngeal region of the throat and producing suffocation when the attachment is severed. The old method of removal by the cold wire snare is in quite general use, but on account of the great vascularity of these tumors and the consequent operative hemorrhage the electric snare recommends itself, since it sears over the tissues and closes the mouths of the blood-vessels with coagula as the tissues are being severed. For the same reason, in those cases in which the form and position of the attachments of these neoplasms lend themselves to such a procedure, the use of the electric knife at a white heat is advantageous. Torsion can be practised when the tumor is distinctly pedunculated.

Certain cases of pharyngeal fibromata can be operated on through the natural oral or nasal passageways by the method mentioned above. Others, either on account of peculiarities of attachment or by reason of excessive or irregular development, must be removed through the soft or hard palate, or by means of resecting the nasal bones or the superior maxilla. Sufficient room for operating may be obtained by dividing the nose along the side of the septum, beginning at the nasal process and cutting from within outward. If more room is required, the nasal process is resected; still better access is afforded by incising the upper lip in the middle line and separating its attachments liberally. The tumor is then detached by one of the methods already described, or by the periosteal elevator, or by blunt-pointed scissors, when it is drawn out with strong forceps. These are very bloody and dangerous operations, and may require a preliminary tracheotomy and ligation of the common carotid artery. However, since the details of these operations, as devised and modified by König, Dieffenbach, Langenbeck, Rouge, Ollier, Kocher, and others are given in other articles in this HANDBOOK, they will be omitted here.

D. Bryson Delavan strongly favors the employment of electricity both for the purpose of cutting off the blood supply of fibromata and shrinking them preparatory to their removal, and for their extirpation as well. Electrolysis is recommended, either by the unipolar or by the bipolar method. Either one is attended with pain. The first is the more painful and slower of the two. The bipolar method is less painful and more rapid and extensive in its destructive effect. Some operators make use of so strong a current as from 80 to 340 milliamperes. After reducing the volume of the tumor it is removed, preferably, by the incandescent wire snare, with the electric current of sufficient strength to burn its way slowly, so as to destroy the tissues thoroughly at the attachment, and to close the mouths of the severed blood-vessels. Delavan gives credit to Lincoln for introducing this method into America after the suggestions of Voltolini and Michel, and he presents, in addition to many cases collected by others, statistical data compiled by himself, which bear out the claims for the superiority of operations by the electrolytic needles and the electric snare through the natural passageways.

The statistical tables referred to cover the decade from 1891 to 1901, and include 80 cases operated upon by various surgeons who performed preliminary operations, such as resections of the nose, the superior maxilla, and the palate. There were 106 cases in which the method of operating was through the natural passages. Of these, 48 are classed as surgical and 58 as electrical procedures. Eliminating all of those cases in which the operators forgot to inform their readers regarding the nature of the results of their work, we have remaining 89 cases which are of actual value in determining the relative merits of the various methods employed. This shows 13 operations involving a preliminary intervention, with 54 per cent. of cures, 23 per cent. of deaths,

23 per cent. of grave hemorrhages, and 17 per cent. of recurrences of the tumors. There were 29 cases in which various surgical procedures through the natural passages were resorted to, and the results were made known. The cures amounted to 86 per cent., the failures about 7 per cent., the hemorrhages about 17 per cent., and there were no deaths reported. There were 47 cases in which electrical operations were performed and the results recorded. The percentages were as follows: Cured, 81 per cent.; improved, 16 per cent.; failures, 2 per cent. No deaths were recorded. By combining all of those operations which were performed by way of the natural passages, for the purpose of comparing the results with those obtained after preliminary procedures, it will be found that the percentages are as follows: Cured, 83 per cent.; improved, 9 per cent. A comparison of the various methods is afforded by the following table.

ANALYSIS OF METHODS.

	Total cases.	Less cases in which results are not given.	Total case histories.	Cured.	Improved.	Died.	Failure.	Hemorrhage.	Recurrence.
Resection of palate . . .	9	-3	6	3	..	..	..	1	3
Resection of superior maxilla	10	-4	6	4	..	2	..	1	1
Resection of nose	11	-10	1	..	..	1	..	1	1
Total	30	-17	13	7	..	3	..	3	5
Evulsion	27	-9	18	16	..	..	..	3	2
Cold snare	21	-10	11	9	..	..	..	2	..
Total	48	-19	29	25	..	..	..	5	..
Electrolysis	34	-3	31	23	7	..	1	..	..
Galvano-cautery loop	15	-8	7	7	..	..	..	..	..
Galvano-cautery loop with electrolysis	1	-0	1	1	..	..	..	..	..
Galvano-cautery	4	-0	4	3	..	..	..	..	1
Galvano-cautery with evulsion	4	-0	4	4	..	..	..	..	..
Total	58	-11	47	38	7	..	1	..	1

LIPOMA.—A lipoma is a tumor composed of fatty tissue produced from a matrix of lipoblasts and may be either circumscribed or diffuse. Its occurrence in the pharynx is exceedingly rare, and the symptoms to which it gives rise are characteristic of a foreign body in the throat. When the growth is soft, it may be mistaken for an abscess; but the symptoms and history of pus formation are lacking, and an exploratory puncture is decisive of this question.

If the tumor is pedunculated, it can be removed by one of the methods described for fibroma, viz., by the cold or the hot snare or by the electric knife; otherwise electrolysis is to be preferred.

ANGIOMA.—This term is used in a broad sense by throat specialists to include all vascular tumors, in conformity with the classification of Virchow. Strictly speaking, the growth consists of new blood-vessels that communicate with the surrounding vessels, of interstitial tissue like that from which the tumor springs, and of the blood within the vascular spaces. In contradistinction to this definition, tumors that are made up of lymphatic vessels are designated as lymphangiomas. The oval group of veins beneath the mucous membrane at the back of the pharynx, known as Cruveilhier's sub-mucous venous plexus, has been found so greatly engorged and tumefied as to cause a sensation as if a foreign body were in the throat, and an annoying cough. The surface presents a hard, lobulated, and purple appearance. Varicose veins are not uncommonly met with in the pharynx, and they may become so numerous and distended as to form groups that are comparable to clusters of currants or blackberries. Hemorrhages may be expected from these growths, particularly following any irritation, such as a digital examination.

Treatment.—If angiomas attain to a considerable size they may cause much discomfort and apprehension on the part of the patient, and they may even so encroach upon the surrounding parts as to impair their functions. A constant desire to swallow, embarrassed respiration and deglutition are not the worst features to consider, but profuse hemorrhages may demand an operation in order to insure the safety of the patient. In such cases the tumor should be completely extirpated. It is rarely sufficiently pedunculated to admit of removal with the cold or the hot snare; hence electrolysis is the most feasible method. Should thyrotomy be resorted to, it may be necessary to perform a preparatory tracheotomy.

SARCOMA.—As a primary disease of the pharynx sarcoma is rarely seen. It springs from the submucous connective tissue, and generally depends from the inferior surface of the body of the sphenoid bone into the pharynx. It is an atypical proliferation of connective-tissue cells from a matrix of fibroblasts of congenital or postnatal origin. Owing to the rich supply of lymphatic structure in this locality and its invasion by the sarcomatous cells the tumor may show a transition into the variety termed lymphosarcoma.

Like fibroma, a sarcomatous growth produces symptoms referable to respiration, swallowing, and the voice in degrees commensurate with the location, size, and shape of the tumor. The nasopharyngeal secretions are increased in quantity, to which is added, after ulceration occurs, a viscid, foul, and bloody discharge. If pain is present, it is in proportion to the amount of pressure exerted on adjacent structures. Although the discharge, which appears after ulceration takes place, is of a sanguineous character, the history of the growth may not present hemorrhages to a serious extent. In order to make a positive differential diagnosis, resort should be had to the microscope. The prognosis is unfavorable; the progress is toward a fatal termination.

Treatment.—If all of the diseased tissue can be removed, this should be done, provided that metastasis has not occurred. It is useless to operate if a part of the growth be left, for rapid reproduction will occur; and if metastatic tumors have formed in other situations nothing will avail from operative procedures on the primary tumor. But if the growth can be enucleated from a circumscribing pseudo-capsule, leaving no remnant of diseased tissue, and if no metastasis has occurred to render nugatory the result of the operation, it should be performed. Otherwise there is little to be accomplished beyond making the conditions as tolerable as possible by the use of cleansing, disinfecting, and astringent applications.

Seth Scott Bishop.

PHARYNX, DISEASES OF: NEUROSES.—Neuroses of the pharynx consist of disturbances of sensibility, secretion, and motion.

ANÆSTHESIA OF THE PHARYNX.—This appears as a complete loss of the sensibility of the pharyngeal mucous membrane, or as a diminution of the same, and can be of either central or peripheral origin. When of central origin it is due to hemorrhage, tumors of the brain which cause compression of the vagus and glossopharyngeus nerves, inflammation of the brain, bulbar paralysis, tabes, or lateral sclerosis. It is seen in connection with epilepsy, after influenza, in anæmia and in hysteria, and is one of the sequelæ of severe general diseases, as pneumonia and especially diphtheria. Cocaine, eucaïne, morphine, chloral, bromide of potassium, carbolic acid, and menthol, when used locally and internally, bring about anæsthesia of the pharynx. The reflexes usually fail, and there is occasionally a feeling of general pain, even in the presence of local anæsthesia.

The diagnosis is made by direct examination. In the case of anæsthesia of one side only, one-half will have the natural sensibility, while the affected portion will be insensitive to mechanical, thermal, or chemical irritations. When the anæsthesia is complete, the mucous membrane is everywhere affected. When the result of diphtheria,

anæsthesia is often accompanied with paralysis of the muscles of the larynx and pharynx.

The prognosis depends entirely upon the cause, and is sometimes good and sometimes bad.

The treatment is based on the cause. Associated with diphtheria, the treatment is that of the general paralysis of diphtheria, and consists of measures to keep up the nutrition of the parts; careful feeding to prevent the introduction of particles of food into the larynx; the use of the constant and induced electrical current; and strychnine internally.

HYPERÆSTHESIA OF THE PHARYNX.—By this term is understood an increased sensibility due to central or peripheral irritations, whereby an extreme sensitiveness of the pharyngeal mucous membrane is brought about, which is described as pain, or is evident in the form of coughing, choking, retching, vomiting, and explosive belching of gases from the stomach.

Hyperæsthesia of the pharynx is a common manifestation, daily seen when an attempt is made at a laryngoscopic or rhinoscopic examination. It is often extreme, many persons retching, gagging, and almost vomiting whenever any instrument is brought near to the pharynx. Even the opening of the mouth and the drawing out of the tongue frequently elicits the strongest reflexes before the instrument has touched any part of the pharyngeal wall. It is common in persons apparently absolutely sound, but is more so in those who are very fat, in drinkers, smokers, and nervous persons. Local diseases, hyperæmia, acute or chronic catarrh, general hyperæsthesia, and increased general nervous sensibility intensify all the manifestations.

While it is a condition difficult to cure by any method of treatment, most persons after a while become used to manipulations in this region, and the treatment of the pathological condition present usually diminishes the sensibility.

Treatment consists in the local use of cocaine, menthol, chloral, bromide of potassium, various gargles, tannin, alum, and adrenalin, and in the avoidance of alcohol and tobacco.

PARÆSTHESIA.—Under this term are included various abnormal sensations, which are described as burning, pressure, itching, dryness, abrasions, lumps, or a sensation as of the presence of a foreign body in the pharynx. Among the foreign bodies complained of are pieces of bone, hairs, toothbrush bristles, needles, pieces of bread, cotton, portions of feathers—in fact, any substance that could possibly stick in the throat. Originally something may have lodged there, but as a rule it has been removed by retching or coughing before the physician was called. Hysterical and nervous persons of both sexes frequently complain of a lump in the throat (globus hystericus), of a burning pain, or of a feeling of icy coldness during the breathing.

Another one of the common forms of paræsthesia is the belief that there is a carcinoma in the throat, the circumvallate papillæ having been felt by the finger; and it is often extremely difficult to rid the mind of the individual of the idea that a new growth is present.

A feeling of extreme dryness, without material objective change, is frequent in mouth-breathers; in chlorosis, anæmia, and diabetes; and in users of morphine, atropine, or belladonna.

Paræsthesia is a more or less constant accompaniment of the chronic pharyngeal catarrhs. It is found in connection with tonsillar affections and with the various pathological changes of the nose and nasopharynx. Inflammations of the interarytenoid region, neuralgia of the superior laryngeal nerve, and affections of the central nervous system are also causative. It can occur as a reflex condition accompanying anæmia, chlorosis, hysteria, uterine and ovarian diseases, early phthisis, and hypochondriasis.

The diagnosis is dependent upon a careful examination of the entire pharynx, which must include an examination of the nasopharynx, tonsils and larynx as well, so that no possible source of irritation, direct or remote,

shall be overlooked. The patient will usually tell whenever a painful area is touched with the probe. Sometimes there are several of these points, which disappear upon painting the area with ten per cent. cocaine. The course is very chronic.

Treatment must depend entirely upon the cause. So far as anything local can be found, appropriate treatment is to be given; while for general nervousness and hysteria the treatment appropriate to this condition must be applied.

SECRETORY NEUROSES.—Hypersecretion of the pharynx is a condition which not infrequently occurs, especially in singers. Individuals with apparently completely normal mucous membranes complain of an increased secretion of slimy mucus in the pharynx, nasopharynx, or larynx, making it necessary to swallow very often, and to spit a great deal when talking, the swallowed secretion being frequently vomited early in the morning. Examination shows more or less of this mucus on the back of the pharyngeal wall and around the velum palati. This condition is sometimes observed in old people. Its cause seems to be some disturbance in the nervous control of the secretory glands.

Treatment is only partially successful. The condition sometimes disappears of itself, but is liable to return. Belladonna has been recommended. Small doses of iodide of potassium or the syrup of hydriodic acid frequently do good by increasing somewhat the secretion of the glands, so that the slimy mucus is less thick and therefore less complained of.

There is also a condition of nervous lessening of secretion, with a feeling of great dryness, seen in connection with hysteria or the use of morphine or belladonna, and found in sufferers from diabetes.

NEUROSES OF MOBILITY.—Cramp-like spasm of the constrictors occurs occasionally, most frequently in persons suffering from dyspepsia or some stomach affection; in general functional neurosis; occasionally in granular pharyngitis, hypertrophy of the side walls, and in connection with inflammatory processes at the base of the tongue. Cramp-like constriction of the muscles, interfering with swallowing, is found in connection with diseases of the brain, and is an accompaniment of tabes. It is most commonly seen as a tonic cramp in hysterical dysphagia. The muscles of the œsophagus are affected at the same time. In cramp of the muscles of swallowing, the passage downward of the mass of food is more or less interfered with. In hysterical dysphagia the swallowed mass is temporarily arrested at some point, usually with a sense of pressure and pain in the neck and around the sternum, then without further hindrance it passes into the stomach, or else with a feeling of suffocation, choking, and explosion of gases from the stomach it is vomited out. The swallowing of solid substances may be impossible for days or weeks.

Cramp of the muscles of the soft palate occurs comparatively seldom. When of a tonic nature the velum is in close contact with the posterior pharyngeal wall, resulting in an altered tone and impossibility of breathing through the nose. The cramp may be of a clonic nature, affecting only single muscles of the velum, as the levator or tensor or the azygos uvulæ. The causes are very various, consisting of true alterations in the nerve supply, central and peripheral irritations, and pathological processes in the immediate neighborhood.

The diagnosis of the various forms of cramp-like action of the muscles is not always easy, since hysterical dysphagia can simulate many affections. It can be differentiated from true paralysis of the muscles of the pharynx by its intermittence, as the phenomenon is not constant. The use of the sound, careful observation of the patient, and the study of all the possible causes will usually enable one to make a diagnosis.

Prognosis depends entirely upon the pathology, as does also the treatment.

PARALYSES OF THE PHARYNX.—These are mostly of central origin. Acute and chronic inflammation of the brain; tumors; hemorrhages which bring about compres-