CATARRHAL INFLAMMATION OF THE LOWER PHARYNX.

Pathology 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 faucæ 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 ABSCES.

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 vertebrae, 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 vertebrae, its march is slower, and the symptoms of pharyngeal obstruction are the first to call attention to the 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 dyspnea 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 vertebrae 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 ESOPHAGUS.

CATARRH OF THE ESOPHAGUS—ESOPHAGITIS.

Causes.—Acute esophagitis 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 convulsive substances.
The chronic variety is produced by the causes which give rise to the chronic stomatitis. The acute and chronic forms differ so little that they may be considered together. The change in the mucous membrane consists in more or less hyperemia, especially about the follicles; at first an arrest of secretion, followed by an abundant pouring out of mucus, which in the chronic form is always in excess. Considerable hypertrophic thickening of the mucous membrane occurs in the chronic malarial, and in some situations it takes on the form of papillary or polyoid-like outgrowths. Coincident thickening of the muscular layer also occurs. Pores of the mucous membrane, at first superficial, are produced by disintegration and separation of the epithelium, and ulcers are then formed, which may extend to the deeper layers. The greatest diameter of these ulcers is parallel to the long axis of the tube. Ulcers also result from the injection of foreign bodies; from corrosive liquids; from tubercular deposition, etc. The catarrhal form may be confined to the follicles, when it is called follicular esophagitis. The follicles are swollen and prominent, partly in consequence of an abnormal accumulation of their contents, and partly in consequence of an hypertrophy and contraction of the adjacent connective tissue. The diseased follicles appear as firm nodules, somewhat conical in shape, projecting above the general surface, and irregularly distributed along the tube. If fibrous or croupous esophagitis also exists, not as an independent affection, but consisting of an extension downward of an exudation, croupous or diphtheritic, or occurs as a complication in typhus, scarlet fever, small-pox, etc. There is, also, a phlegmonous or purulent inflammation of the esophagus, which comes on by extension of purulent infiltration of neighboring parts, as in perichondritis of the larynx, by the action of corrosive substances, by lodgment of foreign bodies, etc.

Symptoms.—In either acute or chronic form, esophagitis produces but few symptoms. Pain in swallowing is usually present in the acute form, and may be developed in the chronic cases by the ingestion of hot or rough foods. Pain may be caused by pressure on the tube from without, and by the passage of an esophageal bougie—a procedure by which we may designate the seat of ulceration, or lesser kinds of irritation, even. When there is severe local disease at any point, an ulcer, for example, food swallowed descends to that point, excites a sensation of heat and pain, and is then regurgitated by a sudden relax spasms of the tube. Sometimes mucus or muco-purulent matter will be found adherent to the particles of food. Chronic catarrh is especially characterized by the production of much glairy and tenacious mucus, which rises into the pharynx, causing the sensation of the presence of a foreign body. The attempt to clear the throat of this often excites gagging. These symptoms are, not infrequently, con-

DYSPHAGIA—STENOSIS OF THE ESOPHAGUS.

Dysphagia, or difficulty of swallowing, is a symptom of disease, but not a disease itself. It is frequently hysterical, when it is accompanied by other hysterical manifestations, as the globus hystericus, laughing and crying, etc. It may be hypochondriacal, when the patients present the deep dejection, the indifference, and other symptoms of that state. It may be due to strictures, succeeding to injury by steam, corrosive liquids, injuries of various kinds, chyluria, malignant disease, etc. It may also be due to paralysis of the palate, sequel of diphtheria. It will be more appropriately considered when those topics are discussed.

STENOSIS OF THE ESOPHAGUS.

Causes.—The term stenosis signifies narrowing of the esophagus, produced in various ways. It may be congenital or acquired: the latter only will be considered here. As regards acquired stenoses, they may be produced by causes acting from without, by compression; within, by obstruction. As respects those acting from without, we find the lumen of the esophagus narrowed by tumors, the enlarged thyroïd, aneurisms, essences lymphatics, etc. Obstructions from the inferior are caused by foreign bodies lodged, which usually produce acute symptoms, but sometimes remain, lodged in pockets or diverticula, for months or years. Parasitic growths gradually developing may cause stenosis. Fibroid polypi, club-shaped or lobulated, slowly obstruct the canal, and hence cause the symptoms of obstruction very slowly. Strictures are formed by the contraction of cicatrizes, or by carcinomas. Cancerous stenoses are more frequent than the others combined. Their usual seat is the lower third of the canal, and they may involve the whole periphery and a considerable part longitudinally.

Symptoms.—Increasing difficulty in the passage of food, which the patient recognizes at a certain point, is usually the first symptom ex-
DIABILATIONS OF THE ESOPHAGUS.

Causes and Symptoms.—Dilatation is a uniform enlargement of the esophagus, the whole cylinder usually being involved. A diverticulum is a protrusion from the wall, laterally, forming a sac of greater or less extent. Ekasia may be caused by fatty degeneration of the muscular layer, which yields in the act of contracting on the bolus as it descends to the stomach. With increasing dilatation, there is increasing weakness of the muscular layer and consequent dysphagia. Vomiting and regurgitation presently occur; after a while the nutrition fails, and the objective symptoms are similar to those of stenosis, the ultimate result being equally unfortunate. Diverticula may be caused by the lodgment of foreign bodies leading to the formation of pouch-like protrusions. Pressure diverticula are usually situated at or about the junction of the pharynx with the esophagus, and in the median line, posteriorly; for here the longitudinal muscular fibers are wanting and the pressure is greatest. When fully formed, they are deep pockets, or sacs, of varying length, and may be several inches deep.

The first step in their formation is the lodgment of a foreign body; then yielding of the muscular layer of the tube, due to fatty degeneration of the muscular elements; increasing pressure from deposits of food and drink; the final result being a sac extending downward and behind the esophagus. The mechanical effect of a sac in this situation is to push the tube before it and compress it, so that ultimately the food and drink drop into the sac instead of passing into the stomach, thus causing the symptoms of stenosis. The symptoms, however, develop more slowly than in even the most chronic cases of stenosis. Diverticula occur in the great majority of instances after
DISEASES OF THE DIGESTIVE SYSTEM.

forty, whence it happens that they are often confounded with cancer; there is no cachexia, and the symptoms continue for years. A bulging, variable in size, may often be observed above the level of the cricoid cartilage; this marks the position of the diverticulum within. The food accumulating here may, by the contraction of the cervical muscles or by the fingers of the patient, be dislodged and is then regurgitated. The sound enters the sac, but is not tightly embraced by it, as is a stricture, and moves about freely in the cavity. Tractation diverticula are found low down, opposite the bifurcation of the trachea, and are caused by various inflammatory conditions leading to adhesion of the esophagus. The tractation thus induced leads to the formation of diverticula.

DISEASES OF THE STOMACH.

POSITION.

The examiner should remember that the stomach lies chiefly in the left hypochondrium—almost wholly to the left of the median line. It may be compared roughly to a chemist's glass retort—the stopped orifice, the cardiac portion, and the end of the long tube, the pylorus. The left lobe of the liver covers the cardia as a rule, and hence the soreness developed by pressure is partly due to this circumstance.

When the stomach is dilated the fact can be ascertained by percussion, merely, in some few instances. Filling the organ by syphon with a known measure of fluid is, no doubt, a certain means of arriving at approximate results. The period when certain kinds of vomiting occur, and the amount and character of the vomited matters have high significance.

An examination of the vomited matters to detect the presence of bile, blood, an excess or diminution of acid constituents, etc., should not be neglected. With this object in view instructions to retain the vomit should always be given. The significance of the abnormal contents of the stomach will be found explained in their proper relations.

FORMS AND VARIETIES.

The diseases of the stomach are named according to their character and anatomical seat. Inflammation of the stomach is called gastritis, and may occur in the mucous membrane, or in the submucous connective tissue. The mucous variety is known as gastric catarrh, and then consists of two forms—acute and chronic; the submucous variety is designated phlegmonous or interstitial gastritis, and may also occur in two forms—acute and chronic; the latter is sometimes called cirrhosis of the stomach. There is also a form of gastritis caused by the ingestion of corrosive and irritant poisons—reticulostomia. Under the term *embryos gastricae* the French authors describe a slight form of gastric catarrh, due to the use of various kinds of indigestible aliment. Severely cases of gastric catarrh, in which in addition to the ordinary symptoms of indigestion, there is present fever, lasting about a week, have been called gastric fever. Chronic gastric catarrh is only another name for dyspepsia.

ACUTE GASTRITIS.

Causes.—The stomach is much affected by atmospheric changes. An illustration of this is afforded in the summer and autumn attacks of bilious and gastric fevers, so called, induced as they are by the very considerable vicissitudes of temperature, the hot days and cool nights of the autumn. Gastric catarrh occurs at all ages after infancy, and is more frequent in men than in women. The most common causes are errors of diet, insufficient mastication of food, swallowing too hot or too cold liquids, excessive eating, abuse of ices, condiments, and sauces, etc., and especially of alcoholic drinks. Various external influences and moral causes affect the digestive functions, as occupation, exercise, sedentary habits, grief, etc.

Pathological Anatomy.—In the simplest cases, the lesions may be so slight as to escape detection; in mild but fully developed cases the changes are about as follows: The mucosa is the seat of a delicate injection occurring in isolated spots, arborescent or generalized to the whole membrane. Usually at or near the cardiac orifice, the injection or hyperemia is most pronounced. The mucous membrane may be intensely engorged, and covered with a grayish, semi-transparent, and tremulous, or mushy masses (Orth). It should not be forgotten that enormous congestion of the stomach may exist in cases of mitral obstruction and regurgitation. The similarity of this to true catarrhal states is rendered the more confusing, because of the quantity of glairy and tenacious masses found attached to the mucous membrane so firmly as to be washed off with difficulty (Wills and Meehan). The mucous glands are prominent, and are increased in size above the normal, in consequence of the overgrowth of their contained cells and the hypertrophy of the adjacent connective tissue. In chronic cases, the glands have shrunk (atrophy), or have become cystic, in some situations, because of the pressure produced by the contracting connective tissue. Sometimes the mucous membrane is softened and easily stripped off; then again, it is indurated and much thickened, in consequence of interstitial inflammation. Much confusion has arisen in regard to the term “mamillated,” which consists in the formation of numerous small, conical eminences, by the contraction of the sub-