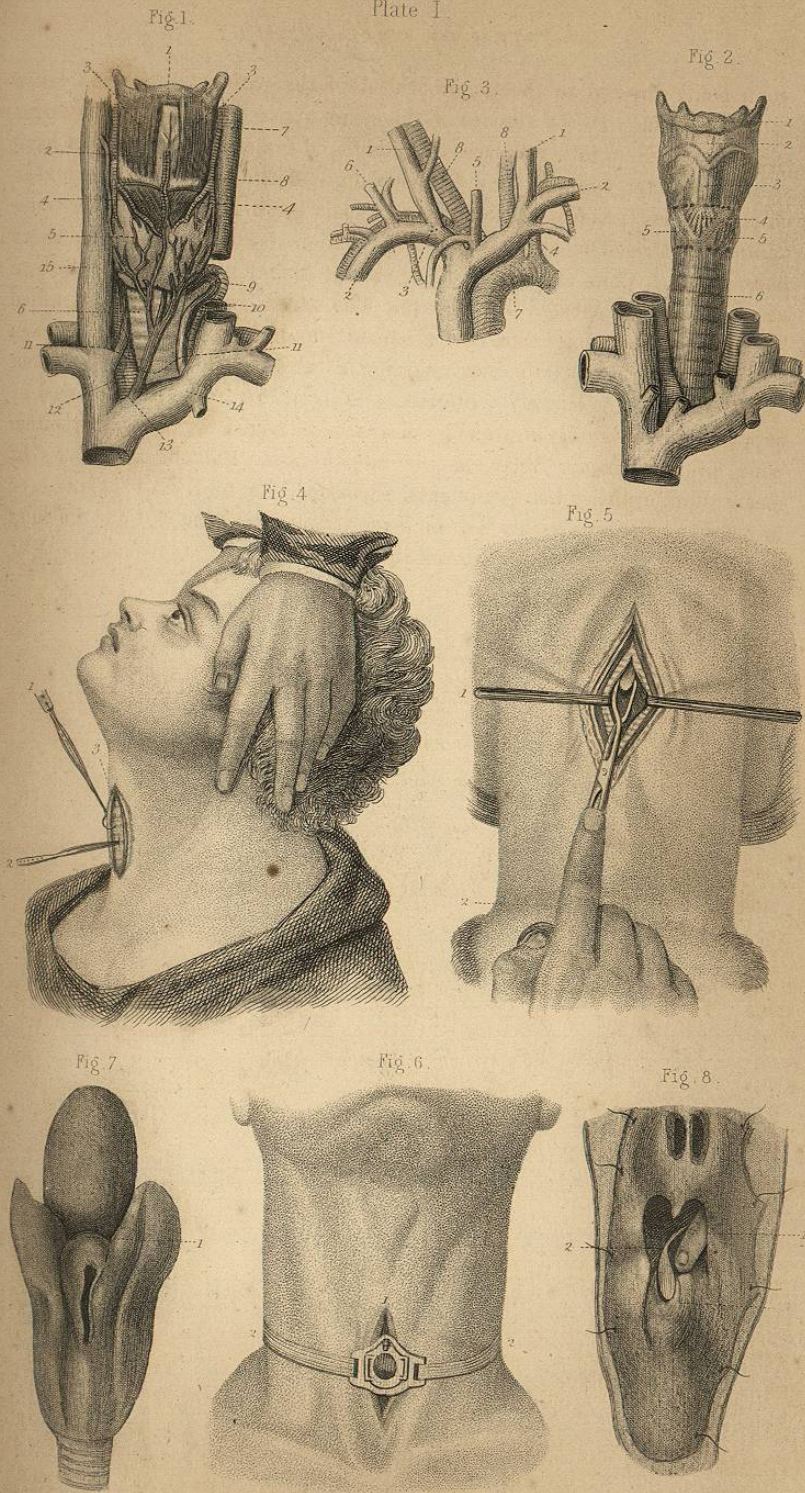


vapor being directed to the neighborhood of the patient, care being taken not to wet him. In the absence of the steam apparatus an ordinary cologne sprayer is made to take its place. Fluids found grateful are tincture of hamamelis, tar-water and glycerine, phénol sodique much diluted, and very weak chlorine-water. Steam applied by the spout of a kettle of boiling water affords great relief to a patient; the application at first to be repeated every hour or two. Close attention is to be paid to clogging of the tube, sure to occur where not combated by moisture. The writer has been hurriedly called from his bed at midnight to find a patient running frantically about a room gasping for breath, examination revealing a tube so clogged with tenacious mucus as to almost entirely obliterate its calibre. Such a case is relieved by supporting the canula in place by means of a finger placed against either wing, in using steam freely, and in picking away the glutinous mass by means of an ordinary hoe-form dental excavator. A tube, after having been in place two or three weeks, is to be taken out and replaced without difficulty or risk. Here it is cleaned without trouble.

Plate I.



CHAPTER XXXVI.

THE TONGUE AND ITS DISEASES.

EXPRESSIONS of the tongue indicative of systemic conditions are not to be confounded with lesions of the organ itself.

Of medical diseases the part has long been esteemed a reliable sentinel. As an index, pointing, through sympathy, to a wide range of morbid affections, physicians have learned through experience to confide in it as among the most useful of guides.

Changes in the tongue, associated with systemic derangement, relate to size, form, color, temperature, moisture, taste, motion, and coating.

Increase in bulk, recognized, while very moderate, by lateral indentation made by pressure upon the teeth, affords not infrequently the first sign of salivation. Pointing, or elongation, is expressive of irritation in the alimentary canal and of determination of blood to that region. A shrunken tongue is met with where atony exists in the digestive organs. Color varies from white to livid: whiteness indicates anæmia; floridity implies, either inflammation of the stomach, or an unduly arterialized state of the blood: redness relates with vascular excitement, particularly as associated with the alimentary canal; lividity signifies prostration. Temperature is influenced by that of the body at large; heat denotes fever; coldness implies diminution in vital force. Moisture, or its absence, is highly significant; a moist tongue in sickness is a good sign; dryness implies congestion or otherwise that force is failing. Taste, or its absence, depends on derangement of the tongue's surface; the cause is commonly found in a coating covering the surface of the organ. Motion affords important indications; inability to control the part implies prostration or cerebral complications; loss of motion on one side points to hemiplegia. Coating is a principal element in tongue diagnosis: a furred condition signifies fever; allied with disease this fur distinguishes itself from that habitual to certain persons by resistance to local means employed for its removal; a white, uniform fur, accompanied with moisture, indicates an open active febrile condition without complications; short and tenacious, showing through the coating a florid base; a typhoid condition is indicated; yellowish fur implies bilious disorder; a brown or black coating implies blood-poisoning, and as well diminution of vitality.

Illustrations.—*Diabetes Mellitus*: Tongue dry, generally red, abnormally clean and fissured; sometimes covered with a whitish and dry coat; sometimes streaks of fur appear in a longitudinal direction along the dorsum;

sometimes covered with rough papillæ; sometimes sticky to the touch. *Abscess of Liver*: Tongue covers itself with a coat grayish yellow in color. *Congestion of Spleen*: Tongue sometimes as if transparent; is pale, commonly thinly coated with a whitish fur. *Diarrhœa*: Tongue dry and stiff. *Atonic Dyspepsia*: Tongue flabby, broad, pale, and enlarged. *Enteric Fever*: Tongue rough, fissured, and dry, indicating ulceration of the Peyer glands. *Malarial Poisoning*: Tongue coated down its middle with a dirty-brown fur thinning towards the tip where the color of the papillæ is to be seen through it; edges flattened, pinkish in color, and traversed by sharp lines conveying an impression of puckering, or corrugation.

The local, or surgical, injuries and diseases of the tongue are many. These lesions are of twofold relation: direct, as reference is had to some immediate cause demanding local attention only; indirect, as constitutional offence is the predisposing or exciting agent requiring to be antagonized.

Local injuries find examples in ulcers caused by jagged and projecting teeth, in cuts and contusions from falls or blows, in bites inflicted by one's self, in insect stings, in burns, scalds, the incautious or accidental mastication of acrid and irritating substances, etc. Local diseases are to be illustrated by reference to hypertrophy, atrophy, erectile, papillary, fatty, and benign cystic tumors, to chancres, to nerve lesions constituting neuralgia, etc.

Localization of Diseased Action.—In his admirable monograph "Studies in the Facial Region," Dr. Harrison Allen divides the subject most happily, as it seems to the writer, into four portions: (a) diseases confined to or appearing on the mucous or epithelial surface; (b) those appearing in the submucous or muscular tissues; (c) diseases of the anterior two-thirds of the dorsum, as contrasted with the posterior third; (d) diseases as influenced by symmetry.

(a) Psoriasis, ichthyosis, keloid, furring, papillary hypertrophy, epithelioma, fissure.

(b) Syphilitic gumma, fibrous tumors, tubercular deposits.

(c) Ulcers of local expression, bites, stings, burns, fatty tumors, cancer.

(d) Hypertrophy, atrophy.

Tongue diseases of systemic relation are venereal manifestations, scrofulous ulcerations, carcinoma. Changes arising from emotional influences are witnessed.

Local Injuries.—Local injuries imply a treatment as directed by indications. Where a cause of offence is seen to be present, the first thing is the removal of such cause; this refers to the extraction of irritating teeth and roots of teeth, to the withdrawing of splinters, the removal of masses of calculus, the antagonizing of acrid agents, etc.

Inflammation arising out of falls, blows, the accidental biting of the parts, burns, and scalds are to be treated on common principles. Ordinary hurt done to the tongue is commonly quickly cured by the remedial power of nature. For the relief of trouble arising out of sting by an insect a mould of mud

applied to the part constitutes a specific application. Burns and scalds are wisely left to nature except where the saliva is found unduly acid; correction of this condition resides in the use of lime-water. Cuts are to be sewed with stitches of the interrupted suture; note of the point being made, that such stitches are to be taken deeply. A manner of treating a cut when it is lengthwise consists in slipping around the organ a wide rubber ring. Vincent suggests the use of a roller, which, binding the jaws together, compels the tongue to lie in place within the lower jaw. The experience of the author commends the suture.

The most frequent disease met with about the tongue is syphilis. Syphilitic ulcers, the commonest of the manifestations, successors to the gumma, appear on any part of the organ, but are most frequently met with on the sides and under surface. Such ulcers are almost invariably accompanied by associations pointing to their origin,—psoriasis on the body, nodes, falling of the hair, lymphatic induration of the posterior cervical ganglia, etc. A syphilitic ulcer on the tongue has the appearance of chancre, hard or soft: such are to be met with where the ulceration is quite deep and the edges heavily indurated. Again, where there is neither excavation nor induration, we nevertheless know, from the associations, and from the peculiar characteristic appearance of the surroundings, that an ulcer is venereal.

A second form of syphilitic disease of the tongue is observed in the induration and hypertrophy of circumscribed patches of mucous membrane. The induration in these cases is so markedly localized that, were it not for their varying locations,—being always, however, on the dorsum,—one might readily believe them to be enlarged vallate papillæ; the patches are quite as large as a dime piece, are elevated, and are as isolated as a fungiform wart. The author has seen two such patches on the dorsum of a tongue, and at the same time a large ulcer on its under surface.

Cracks and fissures are other syphilitic indications met with on the tongue. It may happen in some instances that these fissures are so deep as to seem to divide the organ into a number of parts; they always, so far as the author has observed, run lengthwise. These fissures are at times unbearably sore, denying the patient comfort either in eating or at rest.

Indurations of the mucous membrane of the sides of the tongue from this cause are occasionally observed, or it may be that a general thickening exists, or, indeed, that the whole organ is indurated. In this latter condition the disease has sometimes been mistaken for cancer; but such an error could arise only from a failure to observe the associations of the case.*

* *Syphiloma (Gummata Syphilitica) of the tongue.* Dr. Neumann, of Vienna (*Allgemeine Wiener Medizinische Zeitung, and Half-Yearly Abstract*).—The dorsum of the tongue, as is well known, is frequently at its centre or lateral portions, more rarely at the root of the organ, the seat of infiltrations,—the so-called syphilitic gummatus tumors, the size, superficial aspect, and progress of which undergo many variations. These tumors, which are of firm consistency, are seated partly under the mucous membrane, partly in the mus-

Sometimes the dorsum presents red patches, the result, evidently, of a loss of the epithelial covering. These patches show papillæ but are not ulcerated. They are painfully sensitive to hot or cold impressions. The condition is to be met with where the dorsum seems literally skinned. By those familiar with the diagnostic description of the tubercular ulcer as insisted on by M. Tielert, it will be seen that with such a condition his premises become to a marked degree confused. Bald tongue, recognized in the existence of smooth, glossy patches entirely disassociated with fur, is an expression of specific psoriasis.

To Professor Sigmund we are indebted for knowledge of the fact that the raw ulcerations on the sides of the tongue called syphilitic psoriasis are very contagious, a diseased child poisoning a nurse, and a diseased nurse poisoning a child by chewing its food first in her own mouth.

The treatment of syphilis in the tongue has, with one special exception, the twofold signification of constitutional and local,—the exception being that of chancre. It has without doubt occurred that a man has gotten a chancre upon his tongue. Mercury, in some of its various forms, seems to be looked

ular tissue of the tongue, and are developed from small infiltrations of the size of a pea to prominent nodules as large as a bean or hazel-nut, or even larger. The growth sometimes extends laterally, so as to form level patches; in cases of this kind a greater part of the tongue, especially its edges, feels thickened, infiltrated, and hard as cartilage. In this affection the mucous membrane covering the growth is either smooth or covered by numerous papillary growths, which occupy a large portion of the tongue in the form of broad-based watery formations, or the surface of the dorsum may be traversed by shallow furrows, or by deep fissures crossing in various directions,—rhagades; or, again, if the mucous membrane be irritated by the sharp edge of a decayed tooth, it may present superficial patches of gangrenous tissue.

The whole volume of the tongue is increased to a considerable extent. Finally, the disease may proceed by softening of the nodules to a more or less extensive and deep loss of substance, in consequence of which the tongue on the affected side presents large cavities, which, when the loss of substance has affected the root of the tongue, exert a considerable influence upon the consonance of the speech. The movements of the tongue, also, as in speaking, masticating, and swallowing, cause much pain. These new formations, consisting partly of granulation-tissue and partly of connective tissue,—which tissue, in its further development, becomes either soft and jelly-like, or is converted into adipose tissue, and forms dry yellow lumps,—were described by Robin and E. Wagner as syphiloma. They present granular cell contents, and their cells and nuclei lie in peculiar hollow spaces—alveolar formation.

In cases of this kind one has to distinguish the infiltration of syphilis from that of cancer. Hardness, rapid growth, painfulness, and an uneven surface, are, indeed, symptoms which speak more for cancer than for syphilis; the existence, however, of a sharply-defined loss of substance, and the presence on the dorsum of the tongue of warty or condylomatous growth, are indicative of gummatous deposit. In cancerous growths of the size of syphilitic gummata, the submaxillary glands would certainly be enlarged. In doubtful cases the diagnosis might be determined by means of the microscope. In some cases the distinction may be indicated by the course taken by the disease. In syphilitic gummata the breaking down of the tumor commences deeply, and proceeds to the surface; in cancer the opposite takes place, loss of substance commences superficially, and gradually extends to the centre of the growth.

upon by most practitioners as having in this direction something specific in its nature; without doubt, however, it is a greatly abused medicine, and should be used with more caution and judgment than generally characterize its exhibition. A chancre is to be burned out,—London paste being employed.

Where ulcers or other manifestations upon a tongue are secondary in signification, and mercury has not been used upon the case, it is marvellous how at times, under its influence, such manifestations can be made to disappear. How this medicine is to be used is perhaps best left to be directed by the apparent requirements of individual cases. Of one thing, however, we may be sure: its best effects are not to be obtained by salivating the patient. Mercury in the form of the bichloride is a favorite preparation; it is to be given in doses of the tenth to the twentieth of a grain dissolved in water or the fluid extract of sarsaparilla, three times a day. The hydrargyrum cum creta, combined with Dover's powder, is a combination which is used with benefit where dryness and other lack of function is found in the skin. Impression by inunction is still another mode of exhibiting the medicine. A lump of mercurial ointment, the size of a large pea, may be rubbed into the inner face of the thighs night and morning. Calomel in quarter-grain doses, combined with small quantities of sugar to render it palatable, may be given every two or three hours, until the patient remark the coppery taste. Blue pill, in five-grain doses, answers very well if there be hepatic disturbance, as manifested by gastric derangement and sick-headache.

Of the various mercurial preparations, preference will be found to reside with the bichloride: in this form the impression of the medicine is gradually secured. If necessary, it may be given continuously for a month.

It is a common experience that tonics combined with the mercurial are generally found indicated,—a something to counteract the degenerative tendency which appears to reside in every dose of mercury administered. Iron, quinine, gentian, and the red bark are excellent preparations. A prescription found to be a very good one is as follows:

R.—Hydrargyri chloridi corrosivi, gr. vi;
Tincturæ cinchonæ compositæ, ℥vj. M.
Sig.—A teaspoonful three times a day.

A second, admirable in cases associated with nervous disturbance, is the combination with the mercurial of the pyrophosphate of iron:

R.—Hydrargyri chloridi corrosivi, gr. vj;
Syrupi ferri pyrophosphatis, ℥vj. M.
Sig.—A teaspoonful three times a day.

In syphilitic disease of the tongue, tertiary in its type, mercury will seldom be found admissible; the system is broken down: the process of cure is to be one of repair. These are the patients for the seashore and the hill-side. You will not get them well if you do not build them up.

Conjoined with tonic medication in these cases, very experienced authori-

ties commend, for its alterative influence, the use of the iodide of potassium. Where it is thought desirable to use this medicine, ten grains as a dose for the adult may be given three times a day. It is most conveniently exhibited in water, or, if taste is to be consulted, in the fluid extract of sarsaparilla.

Tertiary symptoms, as M. Ricord observes, do not inevitably occur in the course of syphilis, but they are very likely to do so if the treatment of the primary and secondary symptoms be not conducted with the greatest care. As soon as the tertiary period has set in, mercury is to be abandoned, and iodide of potassium given. Nay, further, as mercury taken in time may prevent or retard secondary symptoms, and so may be regarded as prophylactic against them, so may iodide of potassium be esteemed as prophylactic against tertiary symptoms; and therefore M. Ricord, from the premises of his great experience, teaches that to render the treatment of secondary syphilis complete and rational, it should always be followed by the exhibition of iodide of potassium. This substance is, however, not only useless when employed against secondary symptoms and those of transition, but very often hurtful; yet, when secondaries have been of long standing, it may produce beneficial effects; it is also useful as an adjuvant of mercury in those affections which in some degree lie between the secondary and strictly tertiary manifestations; and, finally, it is indispensable for combating the symptoms of a decided tertiary nature. In order to become well acquainted with the proper manner of administering the iodide of potassium, we should take the trouble of studying its effects, independently of its curative action. First let us see how it acts on the skin. It may produce on the cutaneous surface diverse psudaceous and acnoid eruptions. The pustules are generally surrounded by a vividly red areola, and the usual seat of these eruptions is *below* the umbilical region, as the nates, thighs, etc., whereas the common acne (not to mention its other characters) is mostly situated in the upper half of the body. To these peculiarities, it may be added that the pustules will fall in immediately the administration of the iodide is interrupted. Exanthemata, impetigo, and lichen are very apt to be produced by the use of this salt; and what you ought especially to keep in mind is, that ecchymosis and purpura in the inferior extremities are sometimes caused by the action of the iodide of potassium. The effects of the latter on mucous membranes should also be carefully observed. It may cause inflammation of the conjunctiva; the submucous cellular tissue gets infiltrated and puffed up; the eyelids turn red and œdematous, and, when the inflammation and effusion are not arrested, the internal parts of the eye become involved in the affection, and photophobia is the result of this state of things. The normal mucous secretion is always a little increased, but it does not take the muco-purulent character, as in the case of catarrhal ophthalmia. Coryza, of a more or less severe nature, often exists at the same time; it is preceded and accompanied by headache, and a pretty abundant mucous secretion; but this coryza never reaches the suppurative

state; it seldom produces more than a catarrho-serous flux. These affections never give rise to any fever, and they disappear as soon as the iodide is given up. This coryza is an accident which we should not overlook; for it is of importance to avoid it when we have to treat a tertiary affection of the nasal fossæ. As for the effect of the iodide on the intestinal canal, I have to state that persons enjoying good health can bear very large doses of it; I have given as much as fifteen drachms a day. M. Puche has often given ten drachms per diem, after commencing with six; and it has been noticed that it improves the appetite of the persons who use it. With some patients a certain pleurodynic sensation, corresponding to the cardiac extremity of the stomach, is felt after its ingestion; but it never causes vomiting. The submucous cellular tissue of the stomach may, by the use of this iodide, undergo the same modifications to which we have noticed the conjunctiva to be subject; a sort of hyper-secretion and intestinal ptialism takes place, and much of the fluid which ought to have been secreted by the skin is rejected by the mouth. This liquid has a slight taste of iodine; it is not fetid in the least; the gums are not swollen, and there is no fetor in the breath, as happens in mercurial ptialism. The same effect may be produced on the other portions of the intestinal canal; the patients are then seized with abundant serous diarrhœa. The iodine is eliminated from the system by the kidneys; half an hour after the ingestion of it, its presence may be ascertained in the urine; and it should be remembered that the presence of iodine in the blood increases the renal secretion. I have even observed a case of polydipsia which went on as long as the iodide was used, but disappeared when the latter was discontinued, gradually springing up again as the use of the salt was resumed.

"The effects of the iodide of potassium on the circulation are of a sedative kind; it diminishes the number of arterial pulsations, and lowers their force, but they may regain their normal standard if the remedy act beneficially on the system; the same arterial energy may also reappear when the iodide causes a slight phlegmasia. This salt is somewhat antiplastic; for it has rather a tendency to liquefy the blood, and may even produce the peculiar hemorrhages of purpura. When the effect of the iodide on the nervous system is carefully watched, it is found to cause a certain excitement of the nervous centres, followed by a little uncertainty in the movements and in the intelligence."

A combination much employed by Sir Astley Cooper, in cases where the iodide of potassium did not seem to favor the patient, was the liquor arsenici et hydrargyri hydriodatis,—Donovan's solution.

Concerning the local treatment of the venereal affections of the tongue, with which, in a work like this, we would seem to have most to do, little is to be added outside of the suggestions offered in the previous paragraphs. The treatment has principally to be constitutional in character: direct medication is perhaps to be esteemed simply as palliative.