syphilis and scrofula; and the former by far more frequently than the latter.

If the patient be an adult who has enjoyed at least tolerable health until the present attack, there can be little doubt but that the cause is syphilis. No matter if a syphilitic history is obscure or even denied. Admitting the honesty of the patient, the primary and secondary symptoms may have been overlooked or forgotten, and have left no traces. Tertiary lesions often appear years after the preceding, and when least expected. Then, too, they come isolated, without concomitant symptoms to assist the diagnosis.

If the patient be young, say of ten to fifteen years of age, the chances of syphilis are less, of scrofula greater. Inquire as to the evidences of hereditary taint. When an infant, was the child affected with an eruption, coryza, etc.? Look at the upper incisor teeth; are they well-formed, or do they show traces of hereditary disease? Are the corneæ clear and intact? Are there cicatrices of strumous ulcers upon the neck or elsewhere? In all cases the effect of treatment is a valuable aid to diagnosis. Syphilitic ulceration yields to full doses of the iodide of potassium, as if by magic. Strumous ulceration may be benefited by the same remedy, especially if combined with tonics, but it exhibits no such marked improvement within a few days.

The Pharynx.

Lesions, similar to those occurring in the mouth, are met with in the pharynx. Erythema, superficial ulcers, and deep ulcerations resulting from degeneration of gummatous deposit may be observed. The occurrence of mucous patches of the pharynx has been noted by several authorities, but I have never seen them in this region. Their rarity may be ascribed to the fact that the papillæ of the pharyngeal mucous membrane are of extremely small size. Frequently ulcers extend into the pharynx from the posterior nares. The symptoms of pharyngeal syphilis are usually insignificant, except in the case of ulcers, when there may be pain, aggravated in the act of swallowing, and especially on the ingestion of acrid or irritating substances. The posterior portion of the lateral walls of the pharynx is more often attacked than the posterior wall. Gummy tumors have been observed on the vault of the pharynx and on the upper part of its posterior wall. After destroying the mucous membrane the disease may even invade the vertebræ and produce necrosis, or even inflammation of the contents of the vertebral canal.

Syphilitic ulcerations of the pharynx are of special interest on account of the traces which they leave in the form of cicatrices or of adhesions, which diminish the capacity of the cavity and interfere with its functions. The cicatrices seen upon the pharyngeal wall are quite characteristic. They may present a stellate appearance, or may assume the form of prominent bands. The cicatricial tissue is white and glistening, and may persist indefinitely, or gradually contract.

In rare cases the entire soft palate is destroyed by ulceration, necrosis of the hard palate occurs; and the mouth, the nose, and the pharynx are converted into one enormous cavity. In milder cases, when the ulcerative process is limited to the border of the velum and pharyngeal wall, adhesions may form, which divide the cavity of the pharynx into two distinct chambers, one communicating with the posterior nares, and the other with the mouth. There may be a very narrow passage between these two cavities, or they may be completely shut off from each other, respiration being carried on exclusively through the mouth.

It is often very difficult to distinguish between the deep ulcerations of syphilis and those of struma. There are at least four points to be considered in making a diagnosis. In syphilis other lesions are usually found. Syphilitic ulcerations follow the formation of a gummatous tumor; in but few cases, however, on account of the very slight inconvenience occasioned by even extensive lesions, is the patient observed before complete destruction of the original gummy tumor. Specific ulcers usually progress more rapidly than scrofulous ulcers, and, finally, they yield to specific treatment. Some observers claim that the ulcers themselves present distinctive characteristics, but this can be very rarely the case. The diagnosis must be based chiefly on the antecedents of the patient, and the history of the lesion.

Treatment of Lesions of the Mouth and Pharynx.

The treatment of syphilitic affections of the mouth and pharynx resolves itself into constitutional and local. For an account of the former I must refer the reader to the chapter upon the treatment of general syphilis. Suffice it at present to say that mucous patches, erythema, and the superficial forms of ulcers belong to the secondary stage of syphilis, and require the use of mercurials in accordance with the directions given in the chapter referred to, while the deep ulcerations belong to the tertiary stage, in the treatment of which the iodide of potassium plays so important a part.

Local treatment is of great importance. It is often surprising to see how mucous patches of the mouth and fauces will persist under the best directed internal treatment used alone, and yet how readily they will disappear when appropriate local treatment is added.

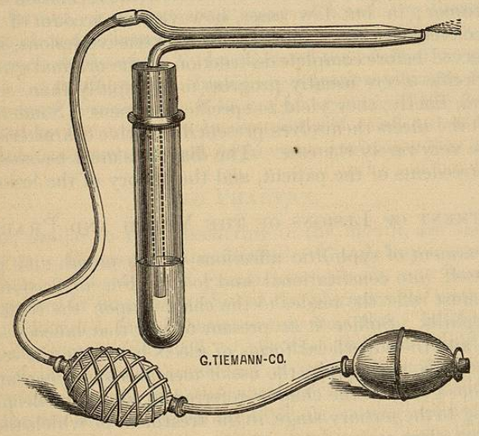
Those situated upon the lips, internal surface of the cheeks, and sides of the tongue, should be touched every second or third day with a crayon of nitrate of silver or the sulphate of copper, or the acid nitrate of mercury. Another excellent application is the chloride of gold, adding just enough water to make it liquid, and applying it with a camel's-hair brush. With those upon the fauces, the walls of the pharynx, larynx, etc., I much prefer the spray of a saturated solution of nitrate of silver, applied by means of the atomizer represented in Fig. 121.

Other forms of the same instrument may be obtained, in which the

spray is directed upwards or downwards for the cauterization of the posterior nares and the larynx. These atomizers have been much improved and perfected by Dr. Louis F. Sass, of New York, to whom I am indebted for those in my possession.

In nearly all cases of the ash-colored, excavated ulcers upon the tonsils or uvula, the stronger caustics, as nitric acid or the acid nitrate of mercury, must be employed. In making these latter applications, great caution is required lest the acid come in contact with the sound tissues, or its fumes be inhaled, and these evils may be avoided by taking care that the probang or glass rod, which is employed, be not so wet as to permit the fluid to drop from it, and by allowing the fumes to pass off before the remedy is applied.

Fig. 121.



The application of caustics should, however, be deferred in cases attended by severe inflammation and swelling of the fauces, which must first be subdued by saline cathartics, rest, mustard pediluvia, and sometimes by leeches at the angle of the jaw. I have found the most grateful topical application under these circumstances to be a solution of tannin in glycerine (℥j to the ℥j), with the addition of extract of opium, if the pain be severe, which may be applied with a camel's-hair brush two or three times a day. Rest should be promoted by means of sedatives, of which Dover's powder is the best.

So soon as the acute inflammation has subsided, various astringent and tonic gargles may be employed with benefit. A good one is the undiluted tincture of Cimicifuga. It should be prepared from the fresh root, as otherwise the effect is much diminished. Washes and gargles containing Labarraque's solution, chlorate of potash, the bi-

chloride of mercury, or the oxymel of the subacetate of copper, also serve an excellent purpose.

℞. Liquor. Sodæ Chlorinatæ, ℥ij-℥iv . .	8	—16
Mellis, ℥j	38	
Aquæ, ℥v	150	
M.		
℞. Hydrarg. Bichloridi, gr. vj		40
Acidi Hydrochlorici, gtt. xij . . .		80
Syrupi, ℥j	38	
Aquæ, ℥viij	250	
M.		
℞. Potassæ Chlorat., ℥j	4	
Infusi Lini, Oj	500	
M.		
℞. Oxymellis Cupri Subacetatis, ℥ij . .	60	
Aquæ, ℥vj	180	
M. (Langston Parker.)		
℞. Acidi Sulphurosi, ℥ss	15	
Glycerinæ, ℥iss	55	
Aquæ, ℥vj	180	
M. (Mr. Shillitoe.)		

Either of the above washes may be used three or four times in the twenty-four hours. In fetid and phagedenic ulcerations of the throat, the following is a valuable formula:

℞. Creasoti, ♏x	65
Mellis, ℥j	38
Aquæ, ℥vij	210
M.	

In all syphylitic affections of the mouth and pharynx, the surgeon must insist upon the patient's abstaining from the use of tobacco, which is found in practice to be the most common cause of the persistency of these lesions, and of their frequent return after removal. Unless this restriction be faithfully complied with, the patient should understand that little permanent benefit can be expected. The question is often asked whether smoking or chewing is the more injurious? Tobacco in any form acts as an irritant, but in the act of smoking a partial vacuum is produced in the mouth, whereby the vessels of the mucous membrane are congested, and I am therefore inclined to think smoking the more injurious of the two habits.

The Œsophagus.

In an able paper by Mr. James West, Surgeon to the Queen's Hospital, Birmingham, which was published in the *Dublin Quarterly Journal of Medical Science* for February, 1860, the probability, if not the absolute certainty, that stricture of the œsophagus may be due to syphilis, was first established.

The case upon which Mr. West's observations were chiefly founded was one of a girl aged 21, who had suffered for several years from

well-marked syphilitic manifestations, such as eruptions upon the skin, ash-colored ulcerations of the fauces, rheumatic pains, and syphilitic cachexia, and who was admitted into Queen's Hospital, May 18th, 1858, for stricture of the œsophagus. Treatment by means of tonics, iodide of potassium, and mercurials afforded only temporary relief, and she succumbed on September 2d of the same year. The following appearances were found at the post-mortem examination: "The upper portion of the œsophagus for about four inches was much dilated; its mucous membrane thickened, and marked by spots having the appearance of recent cicatrices. At this distance from the upper end it was suddenly constricted, and terminated in a narrow canal which would barely admit a No. 4. catheter. This constricted portion, which was about two inches and a half in length, was formed by the thickening of the mucous membrane, and by fibrous deposit in the form of bands and bridles, having very much the appearance of an old stricture of the urethra. Below this track the œsophagus continued perfectly healthy to its termination in the stomach. Both lungs contained tubercular deposit in different degrees of softening, with several small cavities in the upper lobe of each, one in the left apex being as large as a pigeon's egg."

In reviewing this case Mr. West remarks: "We have no account of the swallowing of any caustic or irritating fluid, so that we cannot attribute the stricture to that cause. The presence of numerous recent cicatrices clearly indicated that ulcerations had existed in the walls of the œsophagus. The deposit in the submucous tissue was fibrous; it was exactly similar in nature to that which is so well described by Dr. Wilks as characteristic of syphilitic eruption, and could not under any supposition be referred either to cancerous or tubercular degeneration."

Mr. West[1] has since reported another case in which the pathological appearances were very similar, and states that Mr. Langston Parker has recently met with a case of general syphilis in private practice in which unmistakable stricture of the œsophagus existed.

In reviewing this subject it appears extremely probable that Mr. West is right in his conjecture as to the cause of the stricture in the cases which have come under his observation, since we may readily admit that syphilitic ulceration of the fauces may extend to the œsophagus or attack the latter as a primary affection; and yet it is singular that this effect of syphilis has attracted so little attention from previous observers, and to the names of those authors who are quoted by Mr. West as silent upon the subject, I will add that of Yvaren, whose work on the *Métamorphoses de la Syphilis* includes nearly all the obscure forms of syphilitic disease, so far as they are known. Follin,[2] however, was of the opinion that some of the reported cases of stricture of the œsophagus might be attributed to

[1] Dublin, Q. J. M. Sc.
[2] Des rétrécissements de l'œsophage, Paris, 1853, p. 30.

syphilis, and Virchow has met with contraction of the upper portion of this tube in the post mortem examination of a syphilitic subject.[1]

Some of the cases of syphilitic stricture of the œsophagus, whose advent and whose disappearance under treatment are somewhat sudden, are probably spasmodic, the contraction being excited by ulceration of the mucous membrane of the canal. Organic strictures, which undoubtedly may result from syphilis, are caused by fibrous deposits in the submucous tissue, thickening of the mucous membrane, and by contraction of cicatrices following ulceration.

Obviously, anti-syphilitic treatment can avail in cases of only the former class. The iodide of potassium seems to have given relief in one of Mr. West's cases, while only temporary benefit was derived from the use of mercury.

In cases of organic stricture, dilatation with œsophageal bougies, combined with general tonic treatment, is a palliative resource. When death from inanition seems probable, in spite of rectal alimentation and of medication, the question of producing a gastric fistula arises.

A most interesting case of syphilitic stricture of the œsophagus occurred, several years ago, in the practice of Professor F. F. Maury, of Philadelphia, in which this accomplished surgeon resorted to gastrotomy, after it had become impossible for the smallest quantity of food or the finest bougie to enter the stomach, and the patient had been kept alive for several weeks by way of the rectum. Unfortunately, the operation was performed too late, and the patient died of exhaustion in fourteen hours after. The post mortem showed a very tight stricture, entirely free from any evidences of cancer, just above the cardiac orifice. The patient's syphilitic antecedents had been unequivocal.[2]

Mr. Bryant was somewhat more fortunate in the case of a patient at Guy's Hospital, upon whom he did this operation,[3] life being prolonged until the fifth day. The fatal result was due to pulmonary complication, which Jullien[4] believes is the most frequent cause of death in these cases.

Syphilitic gummata have been found in the wall of the œsophagus, and doubtless obstruction may be caused by the growth of vertebral nodes. Habershon[5] refers to a specimen, in the Hunterian Museum, of a gummatous tumor of the liver, which had produced a similar result.

Stomach and Intestines.

Functional disturbance of the digestive organs is not an uncommon effect of the contamination of the blood by the syphilitic virus,

[1] Syphilis constitutionelle, p. 88.
[2] Am. J. M. Sc., Phila., April, 1870.
[3] Habershon on Diseases of the Abdomen, etc., 3d ed., 1878, p. 73. Quoted from the post-mortem records of Guy's Hospital.
[4] Mal. vénériennes, 1879, p. 848.
[5] Op. cit., p. 76.

as shown by the loss of appetite or the occasional inordinate desire for food, and the nausea and vomiting which sometimes accompany the appearance of early secondary manifestations. The general cachexia belonging to the later stage of syphilis may also be attended by intestinal derangement. But the question is an interesting one, and one not yet, perhaps, fully solved, how far syphilis may produce, in those portions of the intestinal canal which are beyond the reach of sight, the same organic changes and their consequences which are known to exist at the outlets and more accessible portions of the same canal. Are syphilitic erythema, mucous patches, ulcerations, and deposits of gummy material to be found in the stomach and intestines, as in the buccal cavity?

Cullerier[1] believes in a form of enteritis developed in syphilitic subjects, which is probably not ulcerous, and "the specific nature of which cannot be doubted," and he is thus led to admit syphilitic exanthema of the intestines. Post-mortem examinations, however, of persons dying in the early secondary stage of syphilis are rare, so that the above statement can with difficulty be verified. Moreover, enteritis supervening during this stage may be due to the improper use of mercury, or to many simple causes. Hence, we must, I think, regard the existence of syphilitic erythema of the intestines as probable but not demonstrated.

With regard to late syphilitic affections of the stomach and intestines, our knowledge is more definite. Several cases have been reported of persons in the tertiary stage of syphilis, who have suffered from chronic diarrhœa that did not yield to simple treatment, and in whom post mortem examination has revealed ulcerations of the stomach or intestines, identical in their appearance with the ulcerations of gummy deposits on other mucous surfaces. Cullerier gives such a case (*op. cit.*, p. 317). In another instance, reported by Lancereaux (*op. cit.*, p. 311): "The stomach was about of the normal size, but, near the pylorus and on the smaller curvature there was an ulceration which had nearly eaten through the wall of this organ; its edges were bevelled at the expense of the mucous membrane, and were fibrous and indurated; at certain points they were of a clear grayish color, while at others they had a cicatricial appearance. No indurated ganglia in the neighborhood."

Cornil gives a case of gummata of the stomach associated with similar lesions of the liver, the patient having died with pulmonary complication. The only symptoms were indigestion and pain in the epigastrium. An extraordinary case of multiple gummata of the parietal and visceral peritonæum has been reported by Laurenzi.[2]

Lancereaux concludes that the intestinal canal may in rare cases be attacked by syphilis, and that "the multiple and rounded ulcerations, penetrating to a greater or less depth, and circumscribed by

[1] Cullerier and Bumstead's Atlas, p. 260.
[2] Gior. ital. d. mal. ven., Milano, 1871, vol. ii., p. 298.

fibrous tissue, of which it is sometimes the seat, are probably only the sequence of gummy deposits, or, in other words, the result of the degeneration which these deposits have undergone. The simple thickening of the submucous tissue, met with in some instances, and the case reported by Wagner,[1] of deposits not yet ulcerated, are favorable to this view."

This view is still further supported by the beneficial effect of the iodide of potassium in several of Cullerier's cases, given either in large doses internally, or, when the stomach was irritable, in the form of enemata (gr. xv–lxxv ad aquæ ℥iv–vj).

The symptoms of this affection present nothing peculiar to mark their origin, aside from the history of the case and the coexistence of well-marked syphilitic lesions elsewhere. They consist only of an almost constant and obstinate diarrhœa, sometimes with bloody stools, attended with a feeling of oppression and malaise in the abdomen, and occasionally with severe colic. There may also be frequent eructations and vomiting of food a few hours after its ingestion; the appetite diminishes; the patient loses in strength and in weight, and assumes a condition of general cachexia, which is observed in syphilis of other internal organs.

The Rectum.

Chancroids situated near the margin of the anus may give rise to a form of stricture of the rectum, which has improperly been called "syphilitic." Its true pathology was first pointed out by M. Gosselin,[2] who reports twelve cases under his own observation, including three in which he was able to make a post-mortem examination. M. Gosselin's views have been confirmed by other eminent authorities, as Mr. Holmes Coote[3] and Lancereaux.[4] I have myself had several cases under my charge, in which the antecedents pointed in the same direction, and in which a thorough trial of mercury and iodide of potassum failed to afford the slightest relief, as they would have done if the trouble had been of syphilitic origin.[5]

This lesion depends upon a thickening or hypertrophy of the submucous cellular tissue of the rectum, the same as is produced by chancroids of the prepuce and labia minora in the neighborhood of their site, and which has already been described. All the cases thus far reported have occurred in women, as may readily be explained by the greater frequency of chancroids about the anus in this sex.

The patients often complain merely of a frequent desire to go to stool, which is followed by a discharge of pus and sanguinolent

[1] Arch. d. Heilk., 1863, obs. xxix, p. 369.
[2] Des rétrécissements syphilitiques du rectum, Arch. gén. de méd., t. iv., 5e série, p. 667.
[3] Med. Times and Gaz., Lond., Jan. 27, 1855. [4] Op. cit., p. 315.
[5] See also Bull. Soc. anat. de Paris. 2e série, t. iv., 1859, p. 100; also a paper read by the author of this work before the N. Y. Acad. of Med., April, 1864, Bull. of the Acad., vol. ii., p. 280.