Diagnosis.—Color, areola, and slowness of development, distinguish this eruption from ordinary herpes. The circinate form does not progress centrifugally, as do other forms of circinate herpes.

Treatment of the vesicular syphilides is general.

7. Squamous Syphilide.—Nearly all of the eruptions of syphilis go through a desquamative stage, and thus a patch of eruption, which is essentially papular, tubercular, or pustular, may finally become scaly, and, remaining so for a considerable time, pass for a squamous syphilide. So also does pityriasis occur in syphilis, as of the scalp with early alopecia; sometimes in little patches along the margin of the scalp with the other syphilides; again, with syphilitic cachexia, furfuraceous desquamation of the scalp, or even of the whole body, may be encountered, with a dry, rough skin. In none of these cases, however, can it be affirmed that pityriasis is an essentially syphilitic lesion. It is rather a local consequence of general blood deterioration, and may be induced by many causes other than syphilis. There are, however, two varieties of essentially scaly syphilide where the scale is the prominent lesion from the first. These are—

(*a.*) Syphilitic psoriasis, including lepra;

(*b.*) Palmar and plantar psoriasis.

(*a.*) *Syphilitic Psoriasis.*—This eruption occurs in two varieties—as a guttate or diffused psoriasis, and in the circinate (leprous) form. The characters of the eruption are the same in both. They may be met together on the same subject. The patches vary from a split pea to a penny in size—or much larger in the circinate or gyrate form—have (as a rule) the deep syphilitic color, are but slightly elevated above the surface, not papulated. The scales are white, very fine, not adherent, not imbricated (as in true psoriasis). After a few weeks the scales fall. They may be replaced by others, finer than the first, and thus several desquamations occur. Finally, the color pales, and the darkened spot disappears, leaving no cicatrix, provided the eruption has not been a mixed one (tuberculo-squamous), which form does leave scar from interstitial absorption. The circinate form starts as a circle, or segment of a circle, inclosing healthy skin, does not generally increase in size, and lasts from a few weeks in the earlier variety, to some months in the later, where there is more interstitial thickening of the skin. Syphilitic psoriasis does not appear before six months from chancre, and may come on after an interval of many years. It may coexist with other syphilodermata. Scaly syphilides, appearing before six months from chancre, are usually the remains of previous papular eruptions. Syphilitic psoriasis appears upon the trunk, the members, the face, and along the forehead at the edge of the hair. It shows no tendency to locate at the elbows and knees, like non-specific psoriasis. The later its appearance after chancre, the longer does it tend to remain.

Diagnosis.—When not associated with other specific lesions, syphilitic psoriasis is often difficult to distinguish from non-specific scaly disease. Much light is thrown upon such cases by a study of the previous history, on such points as the well-known inveterate tendency of ordinary psoriasis to relapse, its tendency to outbreak in the spring and fall. Neither eruption itches (usually), and both have the same livid redness of color under the scales, but ordinary psoriasis tends to cluster about the elbows and knees, and upon the scalp; its scales are thick, imbricated, tightly attached, and lying in several layers, so that it is difficult to scrape them all away and get down to the livid redness of the patch beneath, and, when the scales are all rudely rubbed off, the patch is very apt to bleed. Common lepra, where the scales come off in patches, is usually much more extensive in its distribution than the syphilitic variety, and often of indefinite duration, which the syphilitic is not. In syphilitic psoriasis the scales are more lamellar, finer, less adherent, not imbricated, or in thick layers, while the duration of the eruption is not so great. Finally, anti-syphilitic treatment has a marked and often rapid effect in the one form, while it does not modify the ordinary variety.

The circinate form in some of its stages exactly simulates ordinary ring-worm, but the diagnosis may be made by the absence of spores, and by watching the course of the eruption, which, in syphilis, remains stationary, while in ring-worm a progressive centrifugal enlargement is observed.

(*b.*) *Palmar and Plantar Psoriasis.*—This eruption consists of rounded, livid colored patches on the palm or sole, slightly prominent, hard, covered by adherent, grayish scabs. The patches may be isolated or confluent, and may reach a large size, extending up to the wrist, or malleolus. Deep fissures may form upon them, caused by motion of the parts. These may bleed and occasion enough pain to restrict movement of the fingers. At the limits of the patches there is usually a characteristic livid areola. This eruption differs from the small circular depressions of the palm with an undermined circumference of white, hard epithelium, left by the papular or erythematous syphilide of the palm, and already described (p. 575). Palmar psoriasis comes on later in the course of the disease, is often of more considerable extent, and lasts for several months, sometimes for several years.

Diagnosis.—The diagnosis with ordinary psoriasis is difficult, unless other concomitant symptoms lend their aid. Ordinary palmar psoriasis is of a higher color, and not so circular in its figure. It generally itches, has no marked areola, and is pretty sure to coincide with other patches of psoriasis (perhaps at the elbows and knees). Scaly patches confined to the palm or sole always excite a suspicion of syphilis, and call for a profound study of the patient's general condition and history. A patient may have had syphilis and still have psoriasis later, not due to specific disease, and no error is to be more carefully guarded against

than that of imagining that, because an individual has once had syphilis, all his subsequent eruptions must necessarily be due to the continued action of the virus. The touchstone treatment quickly reveals the fallacy of this supposition to the intelligent practitioner. Scaly patches, which continue for years in spite of well-directed treatment, are not syphilitic.

Treatment.—Old, obstinate cases of syphilitic psoriasis require local (tar, mercurial ointments) as well as general measures.

8. General Tubercular Syphilide.—Tubercular eruptions are well on the boundary-line of tertiary syphilis. They are more frequently grouped than discrete, and often leave cicatrices without previous ulceration. Still the eruption does occur in a discrete, general form, and may be ranked as a late secondary or early tertiary symptom. The tubercle is a large papule, involving the thickness of the skin. A subcutaneous, gummy tumor is not a tubercle. Tubercular eruptions, generalized or in groups, are rarely seen early in syphilis. A generalized papulo-tubercular eruption may come on at four or five months, but groups of tubercles rarely appear before a year after chancre, and they may come on at any indefinite date. Bassereau notes a case at forty years. The farther from chancre the eruption appears, the more certain is it to be a patch of tubercles and not a general eruption, and the more marked in such a patch is the tendency to ulceration.

There are two forms of this eruption

(*a.*) General tubercular syphilide;

(*b.*) Tubercular syphilide in groups.

(*a.*) *General Tubercular Syphilide.*—The lesion in this eruption is a solid, round, oval, pointed, or flattened tumor, about as large as a pea, at first shining and of a deep red, then of raw-ham or coppery color. They are scattered irregularly, or lie so as rudely to describe circles or segments of circles. Sometimes the eruption is confluent in spots, in which case the skin between the lesions is similarly colored. After a time a superficial scale covers each tubercle; this becomes detached, and then the little tumor sinks away without ulceration. A slight, depressed, and pigmented spot marks for a time the site of the lesion, which also finally disappears, leaving no trace, or perhaps a very superficial cicatrix behind. This scar is the result of interstitial absorption of the substance of the true skin, and does not necessitate previous ulceration.

Diagnosis.—The general tubercular syphilide appears over the whole body, perhaps more prominently on the face and forehead. Its characters are so marked that it is hardly possible to confound it with any other affection.

Treatment is mixed, with local mercurials.

(*b.*) *Tubercular Syphilide in Groups.*—The lesions in this eruption are usually smaller than in the disseminated form, otherwise the same description applies to them. They may be no larger than a grain of millet, but they seem to involve a considerable thickness of the true skin. They may be assembled into irregular groups of rounded contour, or form circles, segments of circles, figures-of-eight. Sometimes each tubercle continues distinct from its neighbor, or they may run into each other, forming a continuous raised welt, inclosing healthy skin, or a roughened, thickened, livid patch. In the circinate form the first tubercles undergo absorption, and are replaced by others circumferentially, causing the ring to grow larger centrifugally, as in ringworm, except that the tubercles which have disappeared usually leave little, smooth, round cicatrices behind, first livid, then white. Patches of very small tubercles leave no scar. Groups of tubercles may occur anywhere, but the forehead, cheeks, lips, and nose, are favorite sites. Groups of syphilitic tubercles, in the period of decline, become covered by a fine desquamation, and, as each patch lasts a considerable time (from a few weeks to several years), the eruption goes by the name of tuberculo-squamous syphilide. Such patches show the tubercular character of the eruption more strongly at the border where fresh tubercles are springing up, while toward the centre of the patch many round, white, smooth, thin cicatrices show where tubercles had previously existed. Such patches are encountered mainly about the forehead and nose. This scarring without ulceration is caused as follows: The syphilitic tubercle is due to a diffuse hyperplasia of small cells in the substance of the true skin. These cells, which partake of the nature of so-called gummy exudation, grow at the expense of the natural tissues, and cause the atrophy of more or less of the substance of the latter, even while there is apparently an hypertrophy, as evidenced by the little tumor called a tubercle. When, however, the adventitious, newly-formed cells go into atrophy, and are absorbed during the progress of the eruption, then, not only does the tubercular prominence disappear, but the scar left attests the atrophy and absorption of the true elements of skin-tissue, which took place during the deposit of the morbid material.

This element is of diagnostic importance. In only two eruptions—the tubercular (non-ulcerated) syphilide, and the tubercular (non-ulcerated) scrofulide in groups (i. e., tubercular non-ulcerated lupus)—is this important feature observed, and the mechanism of the formation of scar is the same in both eruptions. Groups of syphilitic tubercles may soften rapidly and ulcerate, but then the affection becomes frankly tertiary in type (*see* p. 595). The course of this syphilide is always slow, its duration being extended by successive crops of tubercles.

Diagnosis.—It is perhaps possible to confound the circinate form of tubercular syphilide with ringworm, but the greater infiltration of the skin, and usual existence of scars, deeper color, and absence of spores, should protect the practitioner from error. Patches of syphilitic tubercles on a livid base are very apt to be mistaken for non-ulcerative lupus.

In this latter affection the tubercles are flatter, softer, partially translucent, less livid; there is some swelling of the subcutaneous, cellular tissue; the cicatrices upon the patches are puckered, irregular, often ridged with flat, tight, adherent, shining portions, resembling somewhat the cicatrix of a burn, usually with a few veins running over the surface.

Treatment of the tubercular syphilides is *mixed*, with, locally mercurials.

CONCOMITANT SYMPTOMS ON MUCOUS MEMBRANES.

The affections of the mucous membranes found in secondary syphilis are four:

1. Erythema;
2. Ulcers;
3. Mucous patches;
4. Scaly patches.

1. Erythema.—The hyperæmia of mucous membrane seen in secondary syphilis usually attacks the fauces. It generally comes on from three to eight weeks after chancre, and looks and acts a good deal like the erythema occasioned by ordinary cold. It often extends backward into the pharynx and upward into the posterior nares, possibly occasioning a little deafness, especially if the tonsils become engorged, as is not infrequently the case. The nasal mucous membrane is sometimes similarly affected, occasioning symptoms of ordinary catarrh. It occasionally extends downward into the larynx, resulting in slight catarrhal laryngitis, with hoarseness and some cough, occasionally temporary loss of voice. Diday[1] mentions an aphonia occurring early in syphilis, where the voice is not visibly affected, except in the higher notes (in singers), which cannot be sounded. A few days of mercurial treatment restores the voice. The lesion is evidently hyperæmia. Erythema of the fauces is often attended by œdema of the sub-mucous tissue. Faucial erythema usually accompanies the earliest outbreak of cutaneous syphilis. The tendency to the formation of ulcers or mucous patches upon the erythematous surface is great; but, if these do not form, the diagnosis of the affection is not revealed by any special characteristics it possesses, unless it be that the inflammation is less frank, the color more dusky, and the complaints of the patient less urgent than they would be from a similar amount of hyperæmia dependent upon a cold. The syphilitic erythema is sometimes seen in patches, and may be punctate.

Ricord, in his "Iconographie," gives a plate (XV.) of an erythema of the glans penis coinciding with a cutaneous roseola, and this phenomenon, by no means common, may be occasionally observed. Bumstead[2] noticed it in a case prior to the detection of any cutaneous symptom.

The erythema of the throat may resolve, or (more frequently) ulcers or mucous patches appear.

[1] *Gazette Médicale de Lyon*, 1860.

[2] *Op. cit.*, p. 577.

Treatment.—The early erythematous sore-throat, if severe, requires local in addition to constitutional treatment. If swelling and pain are considerable, inhalation of steam and hot fomentations around the neck are soothing. Lactucarium, codeia, or an opiate, is often useful to quiet pain and prevent coughing. The patient should be advised to talk as little as possible, if there is any hoarseness. Flaxseed-tea, containing chlorate of potash in the strength of gr. v–x to the ounce, is useful in tablespoonful doses every hour or two. Saline laxatives, if the inflammation runs high. Gargles are not of much service if the throat is painfully inflamed. Hot milk as a gargle is soothing.

2. Ulcers.—Ulcers superficial in character, round, oval, or irregular in shape, are found upon the mucous membranes early in secondary syphilis. They are very frequently encountered in connection with the erythema above described. Their favorite seat is in the fauces, upon the tonsils, on the half-arches, on the soft palate and uvula, along the sides and tip of the tongue, especially if there be a rough portion of projecting tooth, against which the tongue rubs, on the inside of the cheeks, very often at the angles of the lips, inside the lower lip, under the tongue, along the frænum, etc.; in short, any portion of the mucous membrane of the buccal cavity may be affected, even the gums. These little ulcerations are usually superficial in character at first; if they become deeper, the border thickens, grows red and angry, and a dirty-white pellicle covers the lesion. If they remain superficial, the mucous membrane seems to have been rubbed off, leaving a raw surface, smooth, glistening, red at its edges. Salt, pepper, etc., on the food occasion sometimes a stinging sensation at the abraded points. The surfaces of these ulcerations are prone to become aphthous, covered by a grayish-yellow exudation. Ulcerations of similar character may affect the nasal and genital mucous membranes in both sexes, especially if the parts are not kept perfectly clean.

The superficial ulcers appear early and late during the whole course of secondary syphilis. Lack of cleanliness, the use of tobacco, imperfect teeth, etc., are efficient exciting causes. The ulcerated surfaces sometimes vegetate, i. e., become covered by exuberant granulations.

Deeper ulcers in secondary syphilis may depend upon continuance and extension of the foregoing variety, from continued irritation (a projecting tooth, use of tobacco); or result from ulceration of mucous patches. The favorite seat of such deeper ulcerations is on the tonsils. The whole of the fauces may become brawny around them, dusky in color, thickened. The ulcers themselves have raised, sharply-cut borders, yellow, unhealthy bases, and bear a strong resemblance to ordinary chancroid. They are encountered also at the angles of the lips, inside the cheeks, on the tongue, and are found upon the preputial mucous membrane, and about the anus, extending up into it. They often lead to considerable destruction of tissue in a slow, chronic way, eroding

the whole tonsil, or at the anus destroying tissue and resulting ultimately in stricture. This ulcer and ulcerated chancroid are the most frequent causes of so-called syphilitic stricture of the rectum.

The ulcers above described belong to secondary syphilis. They commence superficially and not from within, and are thus distinguishable (as well as in their march) from gummy ulcerations of mucous membranes belonging to tertiary disease.

The symptoms of ulcerations of the fauces usually complained of are sore-throat, perhaps difficulty in swallowing, and ofter pain under the jaw, caused by sympathetic swelling of the submaxillary glands.

That erythema and ulceration of the other mucous membranes, œsophagus, stomach, intestine, bladder, urethra, etc., may occur in secondary syphilis, although highly probable, is not proved. Symptoms from these quarters are uncommon. Tertiary ulcerations are known to affect these membranes.

Treatment is general and local. (*See* after SCALY PATCHES.)

3. MUCOUS PATCHES.—The mucous patch is a lesion peculiar to syphilis. It is a round, oval, or oblong, pale or rosy, moist spot, usually elevated above the integument, sometimes flat or even depressed. The surface is slightly, sometimes heavily, furred, especially in the mouth. This lesion occurs plentifully about all the mucous orifices, especially around the anus, throat, mouth, and in the preputial *cul-de-sac*. It may develop upon the site of an existing chancre, converting the latter into a mucous patch. The true skin may also be covered by mucous patches, chiefly in regions where two surfaces of skin lie in contact, especially if they are also habitually moist; under the female breast, on the scrotum, or upper part of the thigh, between the toes, at the umbilicus. They are seen also at the edges of the nails. The soft skin of babies is peculiarly subject to mucous patches. Mucous patches vary in size, from the head of a large pin to that of a penny, or become larger if several run together. When occurring upon the skin, they are occasionally dry, wart-like (condylomata), elevated considerably above the surface. Sometimes upon the skin they scab over. Condylomata are seen to best advantage about the anus, perinæum, and scrotum; but even upon the skin the whitish moist pellicle, resembling furred mucous membrane, may cover them. The surface of a mucous patch either upon the skin or mucous membrane may granulate, forming a prominent vegetating surface. Mucous patches around the anus and genitals, especially in the preputial *cul-de-sac* (vagina in female), are very constantly attended by the formation of a viscid, badly-smelling secretion, which, in its turn, if not removed, irritates the skin, causes itching, and may excite a plentiful outcrop of vegetations, lack of cleanliness being the immediate cause of these latter, which themselves are accidental, and not in any sense syphilitic. Mucous patches subjected to friction, or left dirty, are apt to ulcerate. Such ulcerations are seen about the anus, extending perhaps into the rectum, along the sides of the scrotum from friction, between the toes, where they may become very painful, at the angles of the lips, on the tonsils.

The secretion of mucous patches is contagious, and when they are present on the lips, or anywhere within the buccal cavity, the patient cannot be too urgently warned of the possibility of spreading the disease among members of his own family, by kissing or using the same spoon, cup, pipe, etc., as other members of the household. Mucous patches of the mouth are often of irregular shape, owing to the irritation of friction against the teeth. At the angles of the lips, and on the dorsum and sides of the tongue, they are often more or less fissured. The whitish pellicle on the surface is thick and adherent, sometimes covering the whole patch, sometimes having a circinate distribution. The buccal patches are usually flat, sometimes slightly depressed. Upon the tongue they may vegetate, while extensive ulceration upon the tonsils is not unusual. In connection with such ulcerations, the tonsils swell, there is a good deal of inflammatory thickening and induration around, swallowing may become painful, the submaxillary glands enlarge.

Since the use of the laryngoscope, mucous patches have been repeatedly seen within the larynx[1] and trachea.[2] They do not become large in these situations, or secrete much, and they disappear in a few weeks, even without treatment.

Symptoms are hoarseness, perhaps aphonia, no pain, cough, or expectoration.

Mucous patches come on with the earliest syphilides. They appear upon the skin, usually in connection with the papular syphilide, especially the broad, flat variety. They may outlast several crops of different eruptions, and they relapse (especially about the lips, tongue and tonsils) with more pertinacity than any other symptom of syphilis. They occur late along in the secondary and even in the tertiary stage of the disease, but become gradually less and less prominent, until finally they pass over into the scaly patch of mucous membrane, so closely resembling the mucous patch in some of its features.

Nothing is of more importance in the prevention of mucous patches than thorough cleanliness, nothing more active as an exciting cause (upon a syphilitic patient) than local irritation, prominently the use of tobacco, smoked or chewed (for the mouth), or snuffed (for the nose), the retention of a naturally irritating secretion from lack of cleanliness (for the anus and genitals). Mucous patches do not leave cicatrices unless they have ulcerated deeply.

Treatment is general and local. (*See* after SCALY PATCHES.)

[1] Gerhardt and Roth, "Virchow's Archiv.," xxi., 1861. Türck, Ziessl, "Const. Syphilis."

[2] Siedel, "Jenaer Zeitschrift für Medizin," 1866.

4. Scaly Patches.—These patches, sometimes described as mucous patches, and sometimes as psoriasis, resemble mucous patches to casual inspection, but are found on closer observation to differ. They appear on the inside of the cheeks, especially near the angles of the mouth, and on the sides, tip, and dorsum of the tongue. They are rounded or irregular in shape, often gyrate on the back of the tongue. They are flat, smooth, shining, and of the bluish-white color of skimmed (city) milk. When mild, they are not at all sensitive. When severe, they become whiter in color, and the epithelium, whose thickening constitutes the lesions, cracks in places, causing pain. A portion of the epithelium may grow out from the surface, hard, white, adherent, feeling like cartilage. These patches are epithelial hypertrophy. The scales are very firmly adherent, so much so that it is often impossible to scrape them off, and very rough handling fails to provoke bleeding. The patches may become confluent and cover the greater part of the dorsum of the tongue, making it feel stiff and uncomfortable for the patient.

These patches sometimes occur along with the true mucous patch, but usually they appear later in the course of the disease. They may be found at any time, even during tertiary syphilis, and often remain long after all other symptoms have disappeared. They are sometimes seen in inherited syphilis. Smoking is an efficient exciting cause. They are rebellious to internal measures, and are more effectively treated locally. They indicate a continuance of the syphilitic diathesis.

Treatment.—Ulcers, mucous and scaly patches of the mouth and fauces often require other local measures in addition to those advised for erythema of the fauces, which latter are equally serviceable in cases of ulcer, where the accompanying inflammation runs high. The local measures most efficient are removal of all local sources of irritation, which alone are often capable of keeping up the trouble in spite of the best-directed general treatment, such as stumps and ragged edges of teeth; disuse of tobacco, chewed or smoked, and of strong drink, stimulating or highly-seasoned food; a mouth-wash containing chlorate of potash, or tincture of myrrh, carbolic acid, or Labarraque's solution, the latter, if there be any offensive odor; careful cleansing of the teeth and gums with a soft brush. These measures, combined with internal treatment, are often all that is required.

Where, however, a speedy effect is desired, direct topical applications are indispensable. One of the most efficient of these is the vapor of mercury. The best way of using this powerful agent is as follows: Direct the patient to procure at a tin-store a piece of tin ten inches long by three and one-half broad. This should be bent to a right angle at two and one-half inches from either end, or at a convenient distance for the action of a flame from a low (tin) spirit-lamp placed beneath the table, formed by bending the ends of the tin (Fig. 132).

Upon this "table" the powder to be inhaled is scattered, the inhala-

tion being made by holding the mouth over it, or preferably a piece of paper twisted into a cone, the large end receiving the fumes. The powder found most efficacious is calomel, of which gr. ¼–ij rubbed up with two grains of chalk, to prevent too rapid volatilization, is sufficient for a dose, to be repeated three or four times daily. This method of treatment is often promptly effective where the whole tongue is covered with extensive scaly patches, and where large chronic ulcers exist about the mouth and throat.

There is an objection to the treatment, however, which prevents its use in some cases; namely, the provocation of great irritation of the throat, causing severe and prolonged paroxysms of coughing. Many patients suffer no inconvenience from the inhalations; others cough considerably during and immediately after having inspired the mercurial

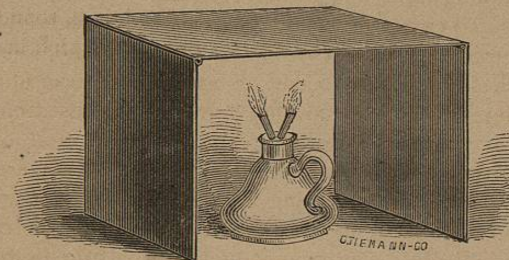

Fig. 132.

fumes; with others no inconvenience is felt at the time, but after perhaps half an hour a violent paroxysm of coughing will come on. Commencing with a small dose (gr. ¼), no accident need be feared as a rule, while the good effect is often quickly perceptible.

There are many other valuable local applications in general use. Sulphurous acid diluted (Shillitoe) is the best, used (ʒ j–ij–℥ j) in spray with an atomizer. Bumstead speaks favorably of a saturated solution of nitrate of silver applied in spray accurately with the atomizer, and in conditions of subsiding acute inflammation praises the undiluted tincture of cimicifuga prepared from the fresh root.

Where there are ulcers, angry and inflamed, the topical application of tannin in glycerine (ʒ ss–j to the ℥ j) is often efficient. For isolated scaly mucous or ulcerated patches frequent light applications of nitrate of silver or sulphate of copper are beneficial, but the best local application is the acid nitrate of mercury. A *very minute* quantity of this caustic is carried to the surface to be medicated upon a glass rod. The application is painful, and the patient is allowed to rinse his mouth at once with cold water.

Mucous patches and kindred ulcerations about the anus, scrotum, preputial *cul-de-sac*, toes, etc., are treated by scrupulous cleanliness, soap