As a matter of fact, the subject of recent syphilis exhibits a tendency to the production of lesions at sites of irritation (condylomata about the uncleansed anus; mucous patches of the mouth irritated by tobacco, smoked or chewed; palmar lesions of the hand-worker); but it is also tolerably clear that for the most part syphilitic subjects undergo surgical operations (cachexia and its complications aside) with very much the same results as in the non-infected. They also exhibit the classical signs of local irritation, not different from those seen in others (urticaria from the attacks of vermin; erythematous redness on the application of a sinapism; zoster after exposure of a nerve-trunk to the predisposing causes of that affection, etc.). It is now accepted that all pus-production in syphilis is the result of mixed infection, and that the staphylococci multiply in its subjects as at other times and in other persons.

On the supervention of other typical disorders in those under the influence of syphilis, the result is conditioned upon the proportionate activity of the one or the other malady. Recently-infected syphilitic subjects exposed to typhoid fever speedily lose all symptoms of the original and exhibit all classical features of the later disease, even to the date of a slow and apparently typical convalescence. On the re-establishment of the health the syphilitic affection, after an apparently absolute quiescence for weeks, resumes its former activity, and the progress of the infective process seems to be resumed at the point where it was temporarily interrupted.

Considering the number of both tuberculous and syphilitic subjects in large cities, it is a matter of great surprise that experts are so seldom confronted with the coincidence of the two affections in one individual; the same may be said of syphilis and of carcinoma, though the different ages of the patients liable to display early symptoms of these two affections may here exert some influence upon the statistics. An attack of erysipelas has often cleared the skin of syphilitic lesions, and, even when occurring in a patient whose luetic affection was grave, has emphasized the date of a recovery without further relapse. Indeed, of the larger number of all injuries and diseases occurring as accidents of the period when the subject of syphilis is displaying evidences of his disease, it may safely be asserted that they proceed to a conclusion which would have been anticipated if no systemic infection had existed.

Syphilis of the Skin.

In hereditary syphilis the bones or the viscera may first manifest the signs of the affection, since the new being is vitiated *ab ovo*. In acquired syphilis, on the contrary, the most obvious of the early lesions of the disease are perceptible in the skin and its underlying connective tissue and upon the mucous surfaces as well as in the superficial lymphatic glands and vessels.

"Syphiloderma" is a term used to include many of these superficial lesions, the early eruptive and late infiltrations and deposits being termed "syphilodermata," or, as the term has been anglicized since its first employment by the French, *syphilides*. The word "syphiloma" is generally restricted to (late) gummatous deposits in the several organs of the body, not merely in the skin, but also in the bones and the viscera.

The study of the eruptive symptoms in syphilis is of the very greatest importance not only for the expert,

but also for him who aims to be an accurate diagnostician in any department of medicine. He who cannot properly interpret these significant symptoms is usually not merely an ignorant but an unsafe practitioner. The peace of families, the conservation of the marriage relation between husband and wife, the reputation of an innocent girl, and the health of uninfected men, women, and children may all be hazarded by the decision of a single case.

General Features and Relations of the Syphilodermata.—Syphilis may invade every organ of the body; it may also involve any portion of the skin. As the chancre may be situated on any part, so the syphiloderm may develop upon any given point of the bodily surface. As it has been seen that the chancre may be represented by every one of the several elementary and consecutive lesions of the skin, so the syphilodermata may develop in each of several forms—as a macule, a papule, a tubercle, a pustule, a bleb, or a tumor—and may betray such consecutive lesions as scales, crusts, ulcers, rhagades, fissures, and scars. A study of the syphilodermata is, in fact, a study of the changes impressed by the infective process upon the simple manifestations of all skin diseases. A syphiloderm may resemble an acne, a psoriasis, a seborrhœa, and even the skin-picture in variola. To determine with certainty that an eruption is syphilitic it is essential that the several modifications of lesions produced by syphilis of the skin be recognized fully. The actual result in any case is a composite of the ordinary pathological processes of congestion, inflammation, infarction of vessel, cell-multiplication, and secretory changes awakened in the tissues, which in all diseases resent these processes.

Characteristics of the Syphilodermata.—*Symmetry.*—Many disorders of the skin attended with eruptions exhibit symmetrically-arranged lesions, such as variola, the medicamentous rashes, and purpura. In syphilis the earlier cutaneous symptoms are usually symmetrical, but as the disease progresses the skin-lesions exhibit a greater tendency to asymmetry, until the latter becomes the rule rather than the exception. The macular syphiloderm of an early stage of syphilis usually displays this symmetrical arrangement in a marked degree.

Color.—Too much significance has been attributed to the supposed characteristic color of the syphilodermata, though often the hue displayed by such lesions is like none other. It is important to bear in mind the obvious fact that the color of an eruption in a blonde and in a brunette subject, in an infant and in an aged person, in a region such as the face and in another such as the inner and superior aspect of the thigh, exhibits the widest contrasts. It is also true that in every person affected with a cutaneous efflorescence the color varies from hour to hour with the degree of congestion of the integument.

In syphilis there is displayed no color which may not at times be recognized in non-syphilitic subjects; but the color with the other picture presented is usually highly suggestive. Its shades vary from a mixture of red, yellow, and brown to an empurpled hue, and they are rarely, if ever, commingled with the vivid and frank rosy tints of an erythema simplex occurring, for example, in a clear-skinned child, or the pure silver-white of the scales seen in lichen planus. The terms "copper-colored" and "raw-ham tint" have been

employed to designate the special hues of the syphilitic exanthem. The deepest shades of greenish-yellow, chocolate, and even black are often noted as sequences of the profound alterations occurring as the result of gummatous ulcers, particularly in the lower extremities.

Polymorphism (Multiformity).—The frequency of the coexistence of several lesions of different types in one person and at one time is a characteristic of syphilis shared by but few other maladies. It is not rare to find a subject of the affection first named exhibiting at a given moment condylomata about the anus, scaling patches in the palms, pustules upon the face, and papules of the thighs.

Configuration.—The arrangement of the syphilodermata in groups or, after coalescence, in figures having the outline of a circle, either complete or in segments, is highly distinctive. Thus are formed odd-looking and characteristic groups of lesions in figures suggesting the shape of a horse-shoe, a kidney, the letter S, the figure 8, and the arrangement of a brooch in oval or circular pattern with crescentic or circular "satellites" at its outer rim. The "serpiginous" feature of certain of the syphilodermata is the result of an evolution of lesions in similar lines spreading from one point of the skin to another in crescentic curves. This special configuration is probably associated with the distribution of the cutaneous nerves in definite areas.

Absence of Subjective Sensations.—The absence of itching and pain in the great majority of syphilitic subjects displaying eruptive symptoms is a striking feature of the disease. The exceptions are, however, often well marked, a peculiarly sensitive individual suffering from pruritus even with macular lesions. It is

also to be remembered that in a few special syphilitic lesions (particularly condylomata about the anus and the vulva, pustules upon the scalp, etc.) the itching may be extraordinarily severe, while the pain of a syphilitic ulcer may be excessive. It is none the less remarkable with how much toleration the average patient displays an abundant exanthem covering almost the entire surface of the body. Indeed, a careful physician is often the first to detect a syphilitic rash, the patient being wholly unconscious of its existence until informed of the fact.

Mode of Evolution.—The syphilodermata are developed with remarkable indolence, and in some cases, especially in those neglected, they have a tendency to recur in different types, to be succeeded by others of a different character, and to undergo extreme metamorphoses *in sitû*, so that, for example, a papule may enlarge, flatten, ulcerate, or disappear and be succeeded by others pursuing the same or another course. It may well be doubted, however, whether this is so much a mode of evolution of syphilis as a variation of its evolution due to the accidents of environment. Syphilis is a disease of relatively chronic type, and it is peculiarly subject to changes induced by improvement in the general health of the patient or the reverse, and in favorable cases by treatment.

Situation.—Every portion of the bodily surface may be the seat of a syphiloderm, but in different localities there is usually seen a different expression of these local manifestations. Those of pustular type are often seen upon the scalp and on the face; papules often appear over the neck and the brow; secreting lesions, about the mucous outlets of the body; scaling patches, on the palms of the hands, etc.

Peculiarities of Elementary and Consecutive Lesions.—Papules are ever predominant lesions of an average syphilitic history. They are usually characteristically ham-colored, and in exposed situations they have a tendency to scale at the apex, to provide themselves around the border with a collarette of dirty-tinted scales, and in others to flatten into broad plaques, to crust, and even to ulcerate.

Tubercles are also common in syphilis, and they are usually grouped. Their color and their frequent tendency to ulcerate and crust distinguish them from the much more indolent tubercles of lupus and lepra.

The crusts of syphilis are usually bulky; they vary in color from a dirty greenish-brown to a dead black. When of rupioid type they are made up of laminated concretions like the shell of the oyster, this feature being produced by the concretion of pus and other inflammatory products upon a secreting ulcer, which, as it spreads beneath, furnishes continually a broader base for the conical crust with which it is capped.

Scales in syphilitic subjects are usually thin, are rarely very profuse or adherent, and are of a dirty-whitish hue. They never exhibit the nacreous shade of the psoriasic skin, nor, as heretofore shown, the silvery sheen of the scales in lichen planus. As distinguished from similar conditions in non-syphilitic disease, they are rarely the sole lesions present, but are more often complications or appendages of other lesions, as, for example, when they crown the apex of syphilitic papules or surround their base, or, as in the palm or the sole, when they furnish a ragged fringe encircling a dull-red patch either ulcerating or threatening such destructive action.

Ulcers in syphilis are usually characteristic. Their base is, as a rule, soft; their edges are steep or undermined and have a punched-out appearance; their floor is covered with a foul pultaceous slough; their secretion is purulent or hæmorrhagic; and their crusts are of the character described above. Often they are surrounded by an angry halo. Their outline commonly observes the several circular shapes already suggested, such as the arc of a circle, a horseshoe, a semilunar figure, etc.

Scars left as relics of ulcerative and degenerative lesions are in syphilis usually pigmented when recent, but when old the pigment gradually disappears from centre to circumference. In circular or oval contour they conform, for the most part, to the configuration of the ulcer or group of lesions that preceded their formation. When completely freed from their chocolate-tinted or violaceous pigmentation they are of a dead-white shade, not greatly differing in this respect from scars in general, but they are, as a rule, much smoother, more superficial, less attached, and more elegant in delicacy of surface wrinkling than most other cicatrices. Their site is often of striking importance: as in syphilis, they are apt to be situated on the anterior face of the lower extremities (the leg particularly), though they may form in any portion of the body (face, arms, scalp, wrists, etc.).

General Considerations relative to the Evolution, Involution, Variation in Type, and Accidental Features of the Syphilodermata.—The conception long held of the classical evolution of a syphilitic affection has to a great degree been modified by later observation and study. With reference to the syphilodermata, it was believed, and with some reason, that their evolution

was by a series of successive eruptions, the one in due course following the other, those of a so-called "secondary" stage at first symmetrical and superficial, fading spontaneously and succeeded later by eruptions involving a deeper structure of the skin. Thus papules were thought to follow macules, pustules taking the place of papules, until a late or so-called "tertiary" stage was in proper course reached, when the syphilodermata, no longer multiple and superficial, became fewer, deeper, isolated, and in various degrees destructive to the underlying tissues.

Such was the classical ideal; but, as has been in part already shown, it was rather an artificial manikin for use in the schools than a pattern fashioned after observation of cases. If any such attack of syphilis has actually been observed, it was certainly an illustration of the very rare exception rather than of the rule.

There are many facts which lead to the conviction that an attack of syphilis in a sound young subject whose case is perfectly managed throughout, with no intercurrent accidents to change its features, is a syphilis exhibiting a single exanthem. This eruption would be of the type of the superficial and symmetrical macular syphiloderm, after the disappearance of which as a result of vigorous treatment no other skin-lesions would appear. Persistent, faithful, and skilful management of the case subsequently should permit no further manifestations of the malady. This is, it must be admitted, a rare event, yet it is one that can be studied as an objective fact, and, rare though it be, it certainly is not so rare as the ideal case exhibiting in turn and in due course each of the syphilodermata in an ordered succession.

The practical deductions from an acceptance of this

new ideal are of importance. In the light of our present knowledge on the subject of micro-organisms and their rôle in the production of disease, it is clear that some of the syphilodermata are the result of mixed infection. Staphylococci are responsible for many, if not all, of the pustular lesions in syphilis. Again, it is capable of demonstration that many of the other syphilodermata are the fruit of local irritations, of errors in diet, in dress, in exposure, and in the habits of the patient. The impression that every eruption recognized in the subject of syphilis is due solely to that disease is so grossly misleading that it should carefully be excluded from all conceptions of the malady. The medicaments swallowed, the soaps employed, the articles of diet and drink consumed, play a significant part in many of the processes to be considered later.

Again, it has been believed that the profuseness of a syphilitic eruption of early development bears some relation to the severity of the disease and to the questions concerned in its prognosis. This is a conception based upon the old rather than upon the new ideal outlined above. As a matter of fact, the first frank expression of constitutional syphilis may be an abundant exanthem of macular type, extensively spread over the bodily surface, possibly sparing no area, and this may prove of better augury than one which feebly manifests itself and is too speedily followed by the symptoms of malignancy to be described later. Complete involution of an eruption of this character is often not followed by the evolution of a crop of small- or large-papular syphilodermata, nor, indeed, by any other eruption.

Classification of the Syphilodermata.—The skin-lesions of syphilis are classified as follows:

I. Macular.	(*a*) Pigmentary.
	(*b*) Erythematous.
	(*c*) Purpuric.
II. Papular, dry.	(*a*) Miliary.
	(*b*) Lenticular.
Papular, moist.	(*a*) Mucous patches.
	(*b*) Condylomata.
III. Pustular.	(*a*) Miliary.
	(*b*) Lenticular.
IV. Tubercular.	
V. Gummatous.	

The compound adjectives "pustulo-crustaceous," "papulo-pustular," "gummato-ulcerative," and others are employed to express the frequent combinations of elementary and consecutive lesions to be recognized clinically in many cases of syphilis.

In these pages all such terms as "syphilitic psoriasis," "syphilitic lupus," etc. are discarded. Combinations of syphilis with other diseases, however rare, are certainly never expressed in dermatological lesions, for an eczema (which certainly may occur in a syphilitic subject) is not a "syphilitic eczema," but is an eczema of unmodified type; and a scaling syphiloderm is never by any possibility a "syphilitic psoriasis," but is a squamous skin-lesion of the specific disorder present.

I. Macular Syphilodermata.

Pigmentary.—The pigmentary syphiloderm occurs without previous involvement of the skin, as a distinct network of pigmented, brownish, chocolate, or even blackish maculæ, the hyper-pigmentation being conspicuous by reason of contrast with the white and unaltered skin about each discolored spot. Gradually,

and very slowly as a rule, the pigment is diminished in the centre of each deposit, and there is formed a whitish central punctum from which the pigment is at last wholly removed. These colorations occur as uniform ill-defined shadings, as pea- to coin-sized spots, or as a reticular arrangement, one form often slowly passing into another as the pigment atrophy and hypertrophy progress side by side. The eruption is seen rather more often in women, and in them chiefly on the neck and shoulders, but it occurs also in men, and over the face, neck, and forearms.

This condition is decidedly more often seen in brunettes than in blondes, in this particular sharing the lot of most of the achromias of the skin. It especially affects in both sexes the Chinese, Indians, and negroes who have contracted the disease. It was once supposed to be rare, but without question is more common than was believed.

The eruption, if such it may be called, develops at any time after general syphilis is declared, but it is much more common in the earlier months of the malady. It is exceedingly indolent, persisting for months, and even in exceptional cases for years, being in but a slight degree amenable to specific treatment. Though thus persisting, the complete involution of the affection occurs without ulterior changes in the skin, which, as a result, does not become the seat of infiltration, of degeneration, nor of scaling. Indeed, it is probably more an indirect than a direct result of infection, and is peculiar in that it is decidedly more common not merely in those predisposed by individual characteristics to pigment anomalies, but also in the uncleanly and the neglected. Anatomically, it is found

that a chronic endothelial inflammation of the smaller cutaneous capillaries occurs, under the influence of which the red corpuscles gradually lose their coloring matters, while eventually an obliterating endarteritis chokes the vascular channels. In the portions where the pigment has apparently been removed the normal quantity of coloring matter has at times been recognized; in other cases a true vitiliginous atrophy of the pigment has followed. It is highly probable that all these changes are under the immediate influence of the trophic nerves.

The pigmentary syphilide should not be confounded with tinea versicolor, which develops often on the neck and the breast, for in the disease last named not only is a fungus visible under the microscope, but the fawn-colored patches are usually the seat of a fine furfuraceous desquamation, readily recognized when the finger-nail is employed as a curette over the surface. The several chloasmata of other sources are, however, to be differentiated with care. Many of them appear on the face, and not elsewhere (the reverse of what is usual in the pigmentary syphiloderm). Vitiligo or leucoderma occurs often on the scalp as well as over the body and the face. Its disks are far more extensive than those of the syphiloderm, being often palm-sized and larger, and when occurring upon the scalp the hairs which spring from the achromatous patch are commonly white. In any doubtful case the symptoms of syphilis, usually declared by other signs in the event of a syphiloderm, should decide the diagnosis.

Circumscribed pigmentations of the skin in syphilis, and even of syphilitic lesions themselves, differ in a marked degree from the pigmentary syphiloderm, since all the former are, without exception, sequences of some

other disturbance (relics of a papular or tubercular syphiloderm, ulceration and cicatrization of gummata, especially in the lower extremities, etc.).

The Erythematous Syphiloderm ("Syphilitic roseola," "Syphilitic erythema"). —It has already been shown that there are grounds for believing that syphilis in an ideal case, occurring in a strong and healthy young subject, well managed throughout the entire career of the disease, would probably have but one cutaneous expression. That expression would be the erythematous syphiloderm. If syphilis be in type a disease of but a single efflorescence, the eruption here designated represents that exanthem. It is the most common, the most frequent, the most benign, the earliest, and the most classical of the skin-symptoms of the disease, to be expected in the great majority of all patients, and rarely failing to appear when awaited and searched for by the eye of the trained physician. It is also in syphilis the exanthem most often overlooked, as it may be limited to regions covered by the clothing, and is for the most part unaccompanied by any subjective sensation such as itching. Women, especially those who are fleshy, when viewing its blush often suppose themselves to have been simply "overheated," and men, especially those inured to work in heavy flannels, look upon its lesions with no anxiety. It it often first demonstrated by the physician engaged in examining a patient for the detection of the character of a chancre.

The exanthem usually first appears between the sixth and the seventh week after the appearance of the chancre, and with exceedingly insidious onset, so that on the very first inspection only a few delicately-tinted spots occur on the surface of the belly; and in

some cases, especially after indulging in a Turkish bath, a dance, or a generous dinner with wine, its lesions may be evolved with surprising rapidity.

The faintest expression of this syphiloderm can scarcely be described. It resembles to a degree the delicate marbling produced when the skin of a healthy person is exposed to cool air after immersion in a hot bath. When well defined, the spots appear as multiple, oval-shaped or rounded, irregularly-defined macules, neither elevated above nor depressed below the general level of the integument, having a diameter of from one-tenth to one-fourth of an inch. Their color varies in different skins and at different stages of evolution of the exanthem, being rarely of a pure rose or a vivid pink, but rather of a dull shade of yellowish-red, sometimes having an empurpled tint, at times so light as almost to suggest a simple erythema. The color fades under pressure of the finger, but later persists, and when further development of the exanthem occurs the maculations furnish a slight elevation of the surface at each point of hyperæmia—a condition approximating that in which papular lesions appear. On complete involution, which often occurs without the sequel of another exanthem of the disease, there may be left transitory discolorations or lightly-pigmented macules persisting for several weeks. As a rule, under appropriate treatment the eruption fades, without the production of desquamation or other consecutive lesions, in the course of from a week to ten days, though occasionally it persists for several weeks.

The abdominal surface and the chest, both anterior and posterior, generally display the exanthem in greatest profusion, but it is also encountered in vivid efflorescence over the extremities, the face, the neck, and,

indeed, over all the bodily surface. When distinctly evolved over the anterior surface of the belly and the back, it is often supposed by inexperienced observers to be strictly limited to these regions, but in almost all cases a careful search will reveal a faint mottling about the outer angles of the lips, in the palms of the hands, over the brows, and elsewhere. It is most brilliantly displayed on the abdominal surface when faintly seen elsewhere, chiefly because of the warmth and clothing of that portion of the body. In some cases it will be seen on close inspection that the arrangement of the macules is in generally circular outlines.

The eruption which represents the transition between that just described and the papular syphiloderm is termed the "maculo-papular." Its peculiarities are briefly those, in varying proportions, of the two primary lesions from which it has its name. The variations between these eruptive forms, macules and papules, are numerous and interesting.

In an exceedingly common variety the macular rash exhibits here and there, often with wide intervals of space, a few isolated papules, usually of the larger or lenticular type, scattered with seeming irregularity over the eruptive field, and springing usually from maculæ. They have a dull-reddish tint, and they often scale slightly over the flattish summit or at the base. These may be sparsely distributed over one region of the body; or when the trunk, for example, exhibits macules in wellnigh pure type, the lower extremities, where there has been some friction and usually also effects of gravitation, display these papules seated on an erythematous base. In yet other cases the papules are of miliary type and spring in large numbers directly from