tute of any offensive odor. There is less flattening of the pemphigoid eminences; and when similar lesions occur in the mouth, the latter are to be distinguished from mucous patches by their extreme soreness and by the fact that in the latter situation they begin as blebs. In pemphigus vegetans there may be fever, and the signs of an exceedingly grave involvement of the system are usually present.

III. Pustular Syphilodermata.

It has been seen that the type of the lesion of syphilis in the skin is to be recognized in the papule. This may spring from a macular lesion or be such *ab initio*, but whether the one or the other, or whether the further evolution be in the line of the squamous syphiloderm of the palm or of the moist condyloma of the vulva, in all these cases the career of the syphilitic affection may be described as pursued within natural parallels. When, however, vesicles, pustules, or blebs appear, it may in general be believed that some accident has intervened to divert that career into singular channels. These accidents are, briefly, first, medicaments employed for the treatment of the disease, productive of medicamentous rashes in the subject of syphilis; second, the invasion of the skin by staphylococci (staphylococci pyogenes albus et aureus); or, lastly, neglect or abuse of the skin, as in case of extreme filth, the application externally of injurious medicaments, and the attacks of animal parasites (fleas, bugs, lice, etc.). It is an interesting and noteworthy fact that the great number of all pustular eruptions in syphilis are observed in public and hospital patients. It is among the rarest of occurrences to find patients of the well-to-do class, properly treated,

exhibiting these symptoms of the disease. These eruptions have, however, been so long classed with the exanthemata due exclusively to syphilis that some boldness is needed to relegate them strictly to the category in which they belong. They have, it is true, the syphilitic impress, but their exciting cause is an accidental, and not an essential, factor in the malady.

Under the title of the pustular syphilodermata are here included all fluid-containing lesions of the skin, such as vesicles, pustules, and bullæ. Many of these eruptive phenomena have been given unfortunate titles in the text-books, such as "varicella-form," "eczematous," "acne-form," etc. These names should all be obliterated from the nomenclature of syphilis; first, because it is unwise to describe one disease in terms of another with which it is liable to be confounded; second, because, to be of practical value in the way of description, a title should have a fixed meaning. The words "eczema," "impetigo," and "ecthyma," which have been used in this connection, no longer describe classically defined symptoms of any skin-anomaly, but mean, instead, ranges of widely differing symptoms due to various causes, and conveying to the eye no such fixed impression as these names are supposed to produce upon the mind.

Miliary Pustular Syphiloderm.—In this eruption pinhead-sized pustules, or, more properly, vesico-pustules, are evolved, each at the summit of a papule, and, as previously suggested, almost always as the result of a febrile state complicating the ordinary evolution of the disease. At times the cause, however, as in the other eruptive disorders of this class, is distinctly due to a secondary infection with the toxines of staphylococci.

The lesions are pinhead-sized, but they may increase to the size of the larger pustules. At times they have a circinate grouping; at other times they are disseminated freely over the face, the trunk, and the flexor surfaces of the limbs. In exceedingly rare cases the eruption is generalized. The pustules may be surrounded by a characteristically tinted areola, and they may disappear by desiccation of the effused fluid into thin brownish or dark-colored crusts, or there may be coalescence of the pustules to the point of formation of a superficially suppurating surface. The firm, shot-like papules on the point of suppurating at the apex have at times been mistaken for the lesions of small-pox, which they greatly resemble. This syphiloderm is frequently recognized within the first few months after infection.

It is somewhat difficult, and from a diagnostic point of view not highly important, to distinguish between the miliary and the lenticular pustules of syphilis, since the former are freely convertible into the latter, and the essential difference between all is merely the degree to which in each the minute abscess spreads in area and in depth. In the one class or the other are evolved the following clinical types:

1. Pustules situated at the orifice of the pilosebaceous crypt, occurring chiefly where those accessories of the skin are largest and most abundant (scalp, face, and upper chest). In these regions minute or even large bean-sized, acuminate, and conical or flattened pustules form; these pustules desiccate into thin crusts or furnish a superficial area of pustulation. The cicatrices left are rarely conspicuous or even permanent; more distressing to the patient is the brownish stain left. The lesions are often distinctly grouped. The general aspect of the

region thus involved (lips, nose, forehead, etc.) is one of extreme dirtiness, even the regions of the skin not displaying eruptive symptoms being unwholesome in appearance and muddy in hue.

2. In a second clinical form the pustules are larger, usually flattish, and, after attaining the size of a pea or that of a large bean, surmount superficial, rarely very deep, circumscribed ulcers (Fig. 3). Here the pus-formation is decidedly more abundant; the copper-

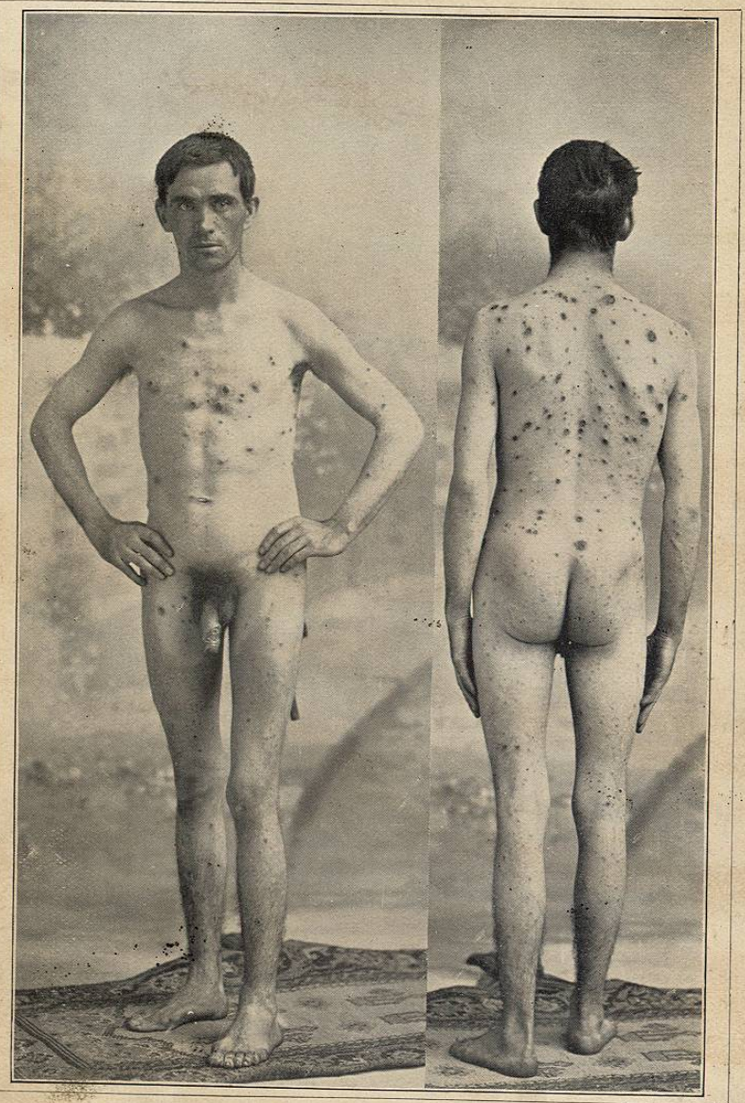
FIG. 3.—Large pustular syphiloderm (Stelwagon).

colored or even chocolate-tinted pigmentation left after involution is more marked, and the resulting scars are more often indelible.

3. In a confluent variety of the larger pustular lesions —as a rule, flattish and decidedly fewer in number than in other cases—there is distinct circular grouping of the pustules and the underlying ulcers. After fusion of the elements of the eruption an ulcerating ring forms, usually surmounted by a dirty-brownish crust, often with a ham-tinted stain at the outer border. Here healing may occur at one or several points, producing thus alternations of crusts and newly-formed epidermis in the ring or the parts of a ring surrounding either an integument unaffected centrally or a healed or healing ulcer.

4. Another clinical form is to be recognized where the lesions are few and are not irregularly distributed over the entire surface, but where six or more form perhaps over the scalp, or a similar number along the alæ of the nose, the extensor face of the elbow, or over the genital region, and perhaps none elsewhere.

Pustulo-crustaceous or Pustulo-ulcerative Syphilodermata.—These terms represent an artificial distinction preserved, as a matter of convenience merely, in classifying the pustular syphilodermata. The lesions thus designated represent a variation in the line of ulceration and consequent destruction of parts deeper than those affected in more superficial erosions (Pl. 4). The pustulo-crustaceous syphilodermata are all pathologically alike, differing chiefly in point of gravity. Each represents a secondary infection of the skin with cocci. Of the members of this group it may be said that the single or sparse lesions are commonly more destructive than those which are decidedly multiple; that in point of gravity a very great multiplicity of lesions betokens a gravity dependent upon the constitutional effect of the involvement of a large portion of the skin in an ulcerative process; and that generally the amelioration of the condition of the integument is proportioned to the improvement in the systemic state of the patient. They represent in general a somewhat late stage of syphilis, and one in which are found patients who are cachectic, poorly fed, or improperly treated or cared for (Pl. 5). Here the pustules tend to enlarge, to develop in more limited and circumscribed areas, to involve a greater depth of the corium and the subcutaneous tissue, and to be accompanied by symptoms of malignancy. The area of each pustule or group of pustules assumes an angry look;



Pustulo-ulcerative syphiloderm, with survival of sclerosis of the penis.

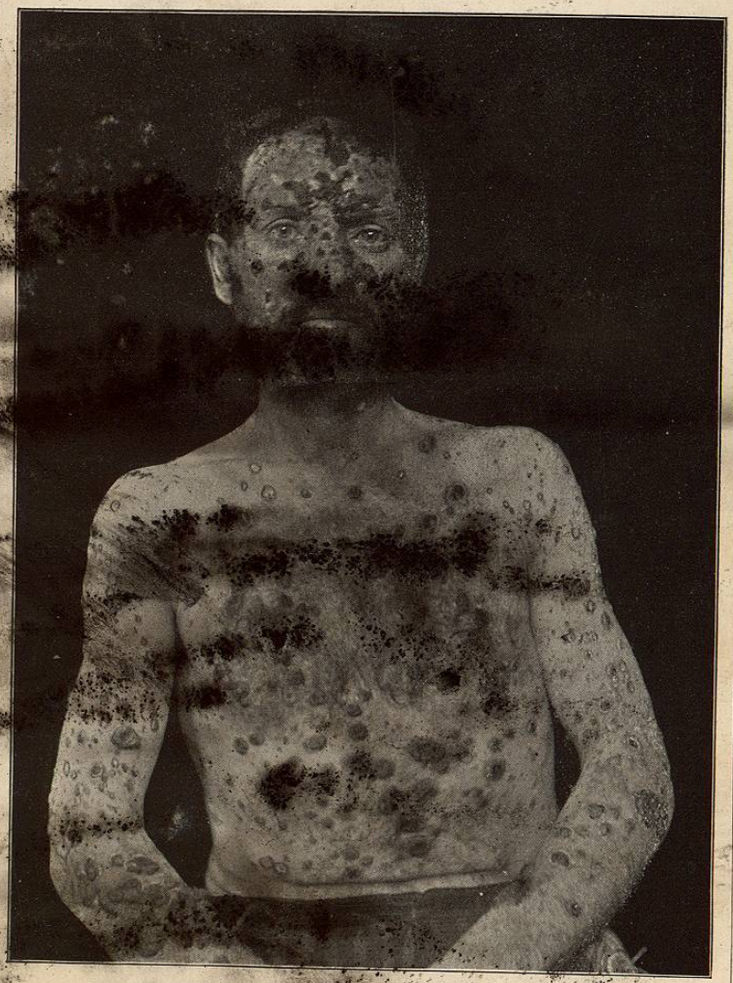
the pus formed is inspissated, hemorrhagic, and commingled with pultaceous sloughs; the resulting crusts are blackish, the scars are persistent, and the pigmentation is deforming and slow to disappear. The ulcers left by the largest and most formidable of these lesions are of the type of the syphilitic ulcer in general. They have clean-cut, punched-out edges, a floor covered with an adherent pus-bathed slough, an engorged base, and a roof at times constituted of the successive desiccations of pus formed from the spreading ulcer beneath, so that a stratified conical crust with limpet-shell aspect is produced. Here, again, the circular, semicircular, horseshoe-shaped, and other combinations of the circle so oddly characteristic of the ulcers of syphilis are constantly encountered.

FIG. 4.—Rupia (after Tilbury Fox).

The oyster-shell-like crusts seen in various sizes in so many of the pustular syphilodermata, especially over large-sized lesions, were once supposed to be produced in other diseases, and the name *rupia* was given to the malady exhibiting these features. One of the axioms of the dermatology of to-day is that the symptoms of

rupia are those of syphilis. Prior to the formation of these crusts there is always a history of, first, infection; second, of the evolution of pustular or bullous lesions with hemorrhagic or semi-purulent contents; third, of the bursting of the chambers containing these fluids; fourth, of their desiccation into greenish or greenish-black crusts, at first scarcely larger than a pea or a bean, later attaining the size even of a pullet's egg; and lastly, of a series of elevations of the stratified and conical crusts by successive accumulations from a constantly widening area beneath, until the picture of the rupioid skin is complete. When repair ensues the crusts fall, the ulcers granulate and become simple and shallower, and cicatrization concludes the history. Here, as so often seen in other of the syphilodermata, the underlying ulcer may assume any of the circular outlines or the shapes of imperfect circles, the overspreading rupioid crust having a similar configuration. The exanthem is rarely generalized, though in extreme cases large areas of the trunk and the limbs may be involved, wide spaces of unaffected skin, however, usually intervening between the conspicuously contrasting crusts. The eruption occurs most frequently in the cachectic, the weak, and the victims of malnutrition, neglect, and poverty. In every instance, however, it indicates a secondary infection with cocci.

The other pustulo-ulcerative or pustulo-crustaceous syphilodermata are variants from the type represented in rupia, and most commonly in the direction of gravity. This is shown by such results as an increased depth of ulceration and more profound involvement and destruction of tissue. Some originate as single or multiple vesico-bullæ of apparently benign character; some as



Pustulo-ulcerative syphiloderm in a cachectic subject.

rapidly degenerate infiltrations which it is difficult to distinguish from gummata. All are apt to leave indelible cicatrices; yet, even after multiple ulcers of severe grade have riddled the integument in certain regions, the extent to which repair occurs and the evidences of damage are in the course of years smoothed away is, as a rule, surprising to those not familiar with these possibilities.

Diagnosis.—From the several lesions described above, varicella and variola, however much resemblance may be traced between the former and either of the latter, may usually be distinguished by the fever of invasion, by the relatively active rather than indolent evolution of their lesions, by the umbilication of the fully-formed variolous vesico-pustule, and by the multiplicity of lesions in severe variolous cases, in which the lesions usually far outnumber the pustules of even the best-developed syphiloderm of the acne type. Signs of syphilis other than pustular eruptions may be recognized in most patients affected with that disease, such as mucous patches, glandular involvement, alopecia, etc. In acne the usual limitation of the eruption to the regions of preference of that disease (face, anterior and posterior aspects of the upper trunk) is generally suggestive, and the sprinkling of comedones among the pustules is significant. In syphilis, pustules of the face often appear in conjunction with similar lesions of the scalp; this condition is practically never seen in simple acne, the scalp in the latter affection being, when at all involved, the seat of either a seborrhœa or an alopecia furfuracea. Acne, however, is exceedingly common in syphilitic subjects, and it should always be recognized when complicating such cases. It occurs, first, as a result of ingested medicines, whether

properly or improperly administered for relief of the syphilis present (iodic or bromic acne); second, as the result of the causes efficient in the production of acne in the non-infected (alcoholism, dyspepsia, constipation, etc.). Hundreds of patients are annually treated for an ancient syphilis which has ceased to exhibit evidences of its existence and yet which is supposed to be in activity because of an unsightly acne.

Pathology.—Under the microscope, sections of a pustular syphiloderm resemble very greatly those made in variolous and other disorders having similar lesions. The usual rents in the epidermis are visible; its remaining strata are pus-infiltrated; the deeper rete is eroded, in parts exposing the corium; the individual elements of the latter are filled with lymph-cells; the blood-vessels are distended, and in places are choked. Chambers originally filled with pus and the detritus of tissue are readily recognized at different levels, according to the depth of involvement of the tissue. Stretched and torn rete and corneous cells are visible both in the cavities and in the walls of chambers formed by the exuded fluid. At times the site of the pustule is a hair-follicle, in which case its adnexa are also involved; at other times the pus-making process attacks the corium outside the pilary and sebaceous pouches. Not merely the entire corium, but the subcutaneous tissue as well, may be involved (Cornil, Kaposi).

IV. Tubercular Syphilodermata.

Pathologically there is little difference between the tubercles and the gummata of syphilis, and even clinically the distinction between the two cannot always be determined. In many cases, however, it is a matter of

convenience to distinguish between the classical forms of these frequent lesions. As a rule, the tubercle is more superficial than the gumma, occurs in less grave forms of the disease, is more apt to resolve and less disposed to degenerate, develops at an earlier period, is much more often multiple and exceedingly numerous, and occurs in a larger number of patients in forms that are grouped.

Syphilitic tubercles may develop in the course of a few months after infection, but they are more common after the lapse of from two to ten years. They invade the face and the extremities, and in these situations and elsewhere (for they may be found in any region of the body) are pea-, split-pea- to bean-sized lesions, the smaller dimensions named being most frequently attained. They are firm, well-defined nodules, neither definitely flattened nor acuminate at the surface, with a tendency to assume the globoid shape. In color they are reddish-brown or copper-tinted, the hue deepening to a dark empurpled shade in the extremities by reason of gravity, and in the face after great congestion or unusual exertion, such as dancing. Their grouping is distinctively and characteristically in circles and portions of circles, further extension of the eruption being by the formation of new and adjacent rings producing the figure 8, the letter S, the dumb-bell, and the "satellites," as in the arrangement of a jeweller's brooch. As they differ in respect to the mode of their involution, they furnish thus a basis for a useful distinction.

Resolutive ("Dry," "Atrophic") Tubercular Syphiloderm.—In this class are placed tubercular lesions which degenerate not by ulceration, but by resolution through metamorphosis of the effused product

beneath an unbroken epidermis. The result is unique —namely, the formation of a cicatrix where there has been no loss of continuity in the outer layer of the skin. The tubercles are then effaced by a species of atrophic

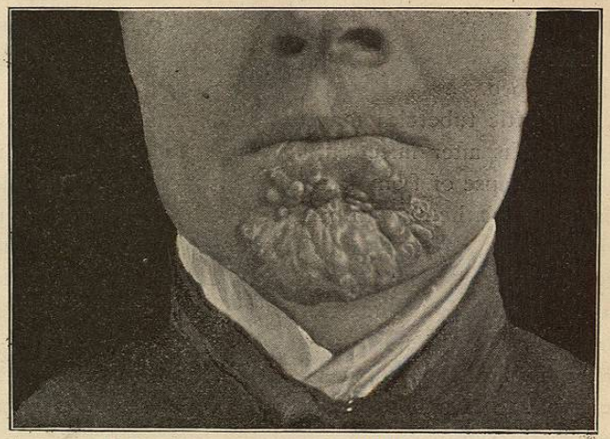


FIG. 5.—Resolutive tubercular syphiloderm in groups.

change, leaving a pigmented and cicatricial macule in the site of each tubercle, the pigment at a later date fading and leaving in its site conspicuous indented scars somewhat smaller than the original tubercle. These groups of scars, circumscribed and with their pigment but partially removed, forming portions of an imperfect circle, one arc of which is represented by tubercles as yet unresolved or but partially effaced, is one of the most striking of the pictures presented in syphilis, and one not imitated in any other disease. Upon the face (Fig. 5), about the knee, upon the elbow, or over the anterior aspect of the forearm in its lower third, these striking composite groups are always significant to the

trained eye. Tubercles of this class upon the palms and the soles are exceedingly apt to scale in process of either evolution or involution, the scaling being at both the summits and the sides of the lesions. The tubercles are in no way distinguishable from those described below, save in the matter of their historical career.

Ulcerative Tubercular Syphiloderm.—In this artificial class the tubercles degenerate by ulceration, this change occurring in different cases as a modification either of the elementary lesion itself or of the underlying tissues to which the ulcer, originally limited to the tubercular mass, eventually extends. In the simplest form these tubercles soften at the summit, exhibiting at this point a more or less adherent, slightly sloughy crust. If this crust be removed with more or less force at an early period, it can readily be seen that an ulcerative process has begun to destroy the upper portion of the small tumor. All the stages of ulceration and repair that follow depend upon the general condition of the patient and the good or bad treatment and hygienic aid which he receives. When the ulcer spreads beyond the mass of the elementary tubercle, it passes into the category of gummatous lesions; but if the degeneration is limited to the original tubercle, the clinical picture is distinct. In these cases circlets, complete or partial, of crusted tubercles or of crust-covered and circumscribed ulcers surround an unaffected or infiltrated area of skin, the color of which is of the type seen in the resolutive groups described above. Upon the face, where these lesions are of special importance and of frequent occurrence because of the exposure of this region of the body to frictional, accidental, and atmospheric influences, the arrangement may be less distinctively in circles;