as, for example, over the sides of the nose, where crusted nodules may be indiscriminately sprinkled over one or both sides with as little order as the lesions of acne with which this syphiloderm has at times been confused.

FIG. 6.—Serpiginous tubercular syphiloderm (after Stelwagon).

Upon the trunk and the limbs, however, the tubercles are often not merely grouped originally in circles or parts of circles, but they spread at times by serpiginous extension until wide areas have been swept over (Fig. 6), leaving, where the activity of the process was once declared, broad, palm-sized and even much larger cicatricial patches where the skin is thinned, and where one can recognize the pea-sized and smaller, depressed and circumscribed points, each representing the site of a former tubercle and ulcer. Often giant circles of involvement, affecting, for example, an entire buttock or a portion of the back, have in this way indolently progressed for

years, the nature of the disorder being misunderstood for that period. Many patients thus afflicted have been treated for years for "lupus," "tuberculosis," and other affections, relief having speedily been effected after discovery of the exact nature of the malady.

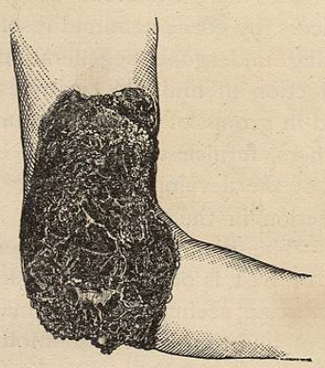

FIG. 7.—Ulcerative tubercular syphiloderm (after Keyes).

When tubercles of this class coalesce and degenerate, it is at times difficult to recognize the elementary lesion present. In these cases, obscure only to the inexpert, the encircling series of small tubercles is replaced by a rim-like wall of elevated tissue, either broken down at several points by the ulcerative process or preparing to break down. The area enclosed may also be found to consist of an infiltrated disk with circles or segments of circles within the parent group, some ulcerating at the outer border, others wholly or partially cicatrized in ineffectual attempts to ensure repair. Typical tuberculo-ulcerative patches (Fig. 7) strongly resemble many of the ulcerations following degeneration of gummata, and it is to be remembered that the process in each is

essentially the same, the differences being due solely to artificial classification. In all the grave and widely-diffused ulcerations springing from syphilitic tubercles, as a rule, the elements last named soon become inconspicuous features of the general process. Repair of the degenerative losses here described occurs by granulation of the ulcers, by effacement and resolution of those not yet having undergone degeneration, and by the eventual production of multiple cicatrices, which, being often arranged in groups of circles adjacent to or encompassed by others, furnish unmistakable evidence, years after the date of the development of the tubercles, of a syphilitic infection in the past.

Diagnosis.—The diagnosis of a tubercular syphiloderm, present or past, is of the very highest importance for the diagnostician, seeing that years may have elapsed after the date of infection before attention is attracted to the eruptive symptoms. Upon the diagnosis may rest a question of life or death, as, for example, when a man lies unconscious from a gummatous involvement of a portion of the meninges of the brain, and there is only a tell-tale scar on the buttock or the loin to indicate the original nature of his disorder.

The papular and tubercular forms of acne, especially in florid-faced male subjects of alcoholism, occasionally resemble a tubercular syphiloderm of the nasal region; but in syphilis there is usually complete failure of symmetry, one side of the nose being predominantly involved, though the exceptions are not rare. In acne the evident involvement of the sebaceous glands, the tortuous vessels visible about the lesions, and the general rosaceous appearance of the organ are characteristic. In syphilis, when at all advanced, there is either distinct

crusting or superficial ulceration beneath the crusts, either of which signs suffices to distinguish the nature of the disease.

The several forms of eczema are all recognized by their inflammatory aspect, their catarrhal features, the intense pruritus they awaken, and the general absence of distinct contour. The scales and the absence of scarring and ulceration in psoriasis usually suffice for its determination. Lupus vulgaris, one of the forms of cutaneous tuberculosis, is perhaps more often confounded with syphilis, or the latter with the former, than are any confused diseases. The distinction is always a matter of great importance. It must be borne in mind, when confronted with any doubtful case, first, that lupus vulgaris is a disease most often beginning in the first or the early part of the second decade of life, syphilis usually dating either from the latter part of the second decade or from that which follows it; second, that lupus vulgaris is decidedly less common than tubercular syphilis; third, that the latter is usually presented, in any doubtful case, at a period from three to eight or more years after the date of infection; lastly, that, as regards chronicity, syphilis is a relatively rapid disease, producing in six months or less a destructive result which tuberculosis would require as many years to accomplish.

The nodules of lupus are readily perforated with a blunt-pointed needle; those of syphilis resist a firm impression. In lupus, even though a patch be formed, it distinctly lacks the ovoid or truly circular configuration assumed by groups of syphilitic tubercles, and it may be said never to produce the combinations of circles previously described. The same is true of the ulcers of lupus as distinguished from those of syphilis, the floors

of syphilitic ulcers, further, being generally covered with a pultaceous slough surrounded by steep-walled edges, while the edges of the lupous ulcer are thin and stretch over softish, pulpy, jelly-like masses of indolent granulations. The degree of pain experienced is far greater in syphilis than in lupus. Over the face, lupus, whether destroying by absorption of the effused product or by ulceration, produces the characteristic "parrot's-beak" deformity of the nose or reduces it or the ear to a shrunken miniature of its former self; while syphilis boldly destroys one ala and at the same time spreads in the nasal fossæ, attacking the bones of the nose and producing its special deformity by the sinking of the bridge. In tubercular syphilis of the face a circlet of lesions forming an infiltrated disk consisting of partly flattened and partly ulcerated tubercles is apt to attack one side of the brow near the root of the nose or to encircle one angle of the mouth; while a lupous patch will involve rather the centre of one or of both cheeks, and will display as many of its uniformly reddish-brown nodules in the enclosure as at the periphery of the patch.

Epitheliomatous ulcers, of the face especially, are more readily distinguished from those of syphilis. They are often surrounded by characteristic "pearls" of cancerous growth; they occur in a much older class of subjects; their floors are smooth and glazed, rarely sloughy; their edges are strongly everted; they are, as a rule, by no means painful; and they observe a far slower evolution, lasting for years without apparent change.

It is to be remembered also that in all forms of sycosis the hair-follicles are primarily involved, and the disease is strictly limited to the region of the male beard; that in leprosy the nodules of the face producing the leonine

aspect are never arranged in circles, but in ridges and rows along the brows, and have a characteristically varnished appearance; that in rhinoscleroma—a disease reported in but a few isolated cases in America—there is a firm, ivory-like hardness to the portions of the nose involved that is not characteristic of syphilis; and that in zoster of the face it is rare indeed that both sides are involved, there being usually a strict limitation to one side of the face of firm nodules just ready to develop into vesicles.

V. Gummatous Syphiloderm.

Gummata of the skin are circumscribed firm nodules, usually involving either the subcutaneous or the submucous tissue, and often attacking later the underlying

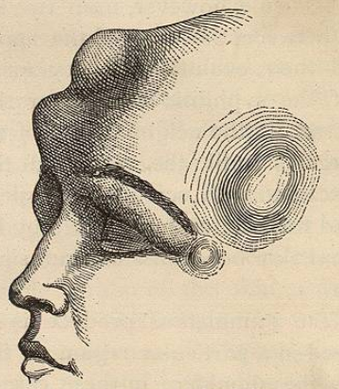

Fig. 8.—Gummata (after Jullien).

structures, such as fascia, periosteum, bone, cartilage, and tendon. They vary in size from that of a small nut to that of an orange, and they are at first uncolored elevations of the skin, but later, when degeneration is

threatened, the integument over each nodule becomes purplish, livid, boggy, and thinned to a point where bursting of the contents of the gumma occurs through its connective-tissue envelope. Its name is derived from the gummy character of the product evacuated when bursting of the neoplasm ensues. When freely forming upon a level surface, gummata are usually globoid in contour, but they may be instead irregularly shaped and even flattened. They are rarely very numerous in one subject at a given time, many patients never exhibiting more than one, or at the most two or three, typical gummata (Fig. 8); in rare instances hundreds form at one time in the same person.

Gummata are usually counted as "late" syphilitic lesions, but they may develop within a few months after infection. As a rule, however, from two to five years or more elapse between the date of the appearance of the chancre and their evolution. They may be the final evidences of the syphilitic process, or they may again and again return in the neighborhood of the first site of their appearance, until the skin and the underlying tissues are seamed with scars commingled with healing and unhealed nodules, and connected by bridges of apparently sound skin beneath which run sinuous channels of ulceration.

At times the gummatous product is more or less widely diffused in a particular region of the body, such as the leg or the shoulder; in these cases, especially if the disease has existed for some time, the appearance is, however characteristic of late syphilis, not always suggestive to the eye of its real character. In these instances large areas as broad as the hand, often with tolerably distinct demarcation, present an exceedingly

irregular and confused surface, seamed with ridges, oversprinkled with nodules and dense indurations, and perforated here and there with ulcers. In extreme cases, where the nature of the disease has been wholly unrecognized for years and where intercurrent eczematous and other affections have complicated the process, a singular variation of type occurs; and, especially where gravity has added its influence, as in the leg, there may be an elephantiasic result which requires careful scrutiny for an accurate diagnosis. In these severe cases the nature of the disease can generally be recognized after study of a small portion of the invaded area, where, wellnigh hidden in a mass of tumefaction, a telltale scar or a circular ulcer with typical edge and floor reveals the truth. In another extreme type the entire gummatous tissue breaks down into a gigantic ulcer as large as or larger than a platter, with an indolent and sloughy floor, a circular outline, and an engorged base. As a consequence of the force of gravity, it is most common to discover these ulcerations on the leg, but they are seen also on the shoulders and on the back. When in the former situation, however extensive, they rarely completely girdle the ankle or the lower third of the leg, as may other ulcerative processes in this region, but a considerable portion of the skin, usually posterior in position, remains unaffected. Upon the face the destruction, if less extensive, is usually more hideous (Fig. 9). Here a gigantic excavation may result from the breaking down of gummatous infiltrations whereby the nasal and oral cavities are converted into one gaping chasm, as in the severe grades of epithelioma. A large portion of the pinna of one ear may slough. The bones of the face, skull, and jaws frequently suffer, and ectro-

pion, flattening of the nasal bridge, and extensive mutilation of the lips and the ears may ensue.

Not the least conspicuous among the distinctive features of these severe ravages of syphilis is the extraordi-

FIG. 9.—Cicatrices resulting from extensive gummatous infiltration of the face.

nary extent to which, when properly treated, repair ensues. When the general cachectic condition (evident in almost all this class of patients) yields to proper hygienic and medicinal treatment, cicatrization follows after even the most extensive and mutilating damage; the deformity is slowly smoothed away so as to escape recognition save by the experienced eye, and the patient may enjoy a future life without return of the old trouble. In this way an obturator enables one man to close the gap between the mouth and the nasal cavity; another, who has an opening connecting the œsophagus and the larynx, can in certain postures and by the aid of special devices swallow food without its access to the respiratory tract; and even the most disfiguring scars of the face are slowly freed from pigment and diminished in circumference and irregularity until a degree of sightliness is produced (Fig. 9). It should not be forgotten, especially in relatively young patients, that even with the worst accidents the recovery, under anything like fair treatment, will surpass the hopes of the most sanguine. It is in this respect that syphilis draws a sharp and significant distinction between itself and all other diseases productive of destructive effects—a distinction of the highest value with respect to diagnosis.

Diagnosis.—The term "gumma" has lately been affixed to the somewhat similar cutaneous lesions of tuberculosis (lupoma, *gomme scrofuleuse*), and the resemblance between these and the gummata of syphilis is not slight. In the former the recognition of other tuberculous or scrofulous symptoms, their occurrence at an earlier period of life than most cases of syphilis, and the characteristic elevated longitudinal ribbons of empurpled and thinned skin, especially on the neck, enclosing depots of ill-conditioned pus, are common. When degenerating, there are formed linear or narrow ulcers with thinned edges and pulpy floors covered with soft granu-

lations, the enlarged glands in the vicinity not yet being broken down.

Sarcomatous tumors are usually multiple, occur in conditions where cachexia is more marked, and are, as a rule, slower of evolution than syphilitic gummata, though at times undergoing rapid changes. They are rarer in the lower extremities than elsewhere—a distinguishing feature of gummata in syphilis.

Lipomata are readily differentiated from gummata by the softness to the touch of the former and by the "pillowy" feel of the growths, which, furthermore, are usually of far longer duration without change than syphilitic tumors. From a gumma, epithelioma is at times distinguished with ease, at others with very great difficulty. The following points are to be remembered: Cancer, as a rule, occurs at a later period of life, but at times the gummatous changes in syphilis occur at the same age. In epithelioma of the skin the "pearls" or waxy nodules, scarcely larger than pinheads of good size, are characteristic, and are never seen in syphilis. The course of an epithelioma of the skin is far slower than the career of a gumma, the latter rarely requiring more than a few months for its termination either by resolution or by disintegration, while a cancer of the skin may endure with less destruction for a decade of years. Multiplicity is true of the syphilitic more often than of the cancerous ulcer. The edges of the specific ulcer are steep or undermined; those of the epitheliomatous excavation are everted often to a very marked degree. In syphilitic ulcer the floor is sloughy or pus-bathed; in cancer it is, when typical, covered with a thin, varnish-like secretion which scarcely conceals the florid and irregularly excavated surface beneath.

Gummata of the progenital region are at times liable to be confounded with initial scleroses and chancroids, but the accompanying adenopathy of the latter, their relatively rapid career, and the greater extent of the infiltration of the gumma usually indicate the difference. The chancroid is always more distinctly purulent and less indurated than the gumma.

Ulcers of the leg resulting from pressure-effects in the subjects of varicose veins of this region and of the thigh often present a strong resemblance to the ulcers of syphilis, but the distinction between the two can usually be made without difficulty. In the one case the enlarged veins, in the other the painful character of the trouble, the œdematous condition of the limb, the frequent coexistence of eczema, and the entire absence of a well-rounded scar or a deep circular ulcer, usually aid in the diagnosis. The picture in the non-specific disease is usually more serious than in the syphilitic disorder which it is sought to differentiate. The pigmentation in long-standing cases is far deeper and blacker in shade in the varicose condition, in consequence of the extravasation of blood. A tolerably clear outline to any given patch of diseased skin, and an absolutely unaffected integument in close proximity to an ulcerated or engorged patch, point always in the direction of syphilis.

Pathology.—Anatomically, the tubercle and the gumma of syphilis are practically identical. The process is essentially one of disintegration of the component parts of the nodule, with central fatty and purulent degeneration of fibres, cells, and nuclei, and peripheral proliferation with round cells commingled with few giant-cells surrounded by connective-tissue fibres.

The zone of proliferation about the central depot of globules is evidently protective in character (Kaposi, Basset).

The groups of syphilodermata described above are classified in the artificial divisions, between which they can, for the most part, readily be separated. There are, however, a few manifestations of syphilis in the skin, the peculiar features of which justify special consideration. They are, in point of fact, modifications of the symptoms already described.

Serpiginous Syphiloderm.—The term "serpiginous" was originally employed, as its etymology suggests, to designate a lesion displaying "creeping" features, a slow and gradual extension from one point or from several points to others on the cutaneous surface. At present the word designates the peculiarities which may be assumed by one or another of the syphilodermata, rather than any special exanthem of syphilis. In a serpiginous eruption there is extension of the disease, either by ulceration or by retrograde metamorphosis, at the periphery of an involved patch, while the central portion is the seat of partial or complete cicatrization. While this effect may not rarely be noticed in any of the ulcerating or resolving syphilodermata in groups, the term "serpiginous" is applied specifically to those cases in which this peripheral extension and centric involution are decidedly more pronounced than other features of the disease at any time present.

The serpiginous feature may be assumed, as has been seen, by a group either of pustules, tubercles, papules, or gummata. Beginning with one or a group of several of such lesions, the process may be either superficial or

deep. As a rule, the most ambulant and erratic of these serpiginous patches belong to the former rather than to the latter class.

On the earliest recognition of a serpiginous tendency in any patch of disease, it can be seen that the clearly-defined peripheral wall is spreading either in equal radiations from a central point (artificially placed) or, rather more commonly, more actively in one direction than in any other. The peripheral wall may be built up either of confluent papules or tubercles or any crusted lesions of the types named, or by sequelæ of any of the latter in the form of a shallow ulcer, circular in outline, resembling a moat about an enclosed field. The central area may then be made up of infiltrated integument, pigmented or otherwise discolored, or by small coin-sized cicatrices, or by partly-healed ulcers of smaller dimensions than the mother-lesion within which they are confined. As the environing circle with its wall and open or crusted ulcer widens, the central area proceeds to a more complete involution, leaving at last broad spaces often converted into a smooth scar-tissue, or a field in which the delicate creases and punctate markings suggest the action of the tool of the engraver on the surface. This odd-looking involvement of the integument may be in progress for months and years, spreading from one or more primary points and gradually migrating over an entire thigh or abdomen, the patient meantime often displaying in other respects a marked degree of general health and vigor.

When the action is deeper, the ulceration, invading the subcutaneous and even the deeper structures, usually begins with the disintegration of tubercle or gumma and spreads by extension, more often downward and deeply