regions, and more often on the legs, near the joints, than on the thighs.

Characters of the Scales and Crusts of the Syphilides.—The scales of specific eruptions are thinner, less numerous, and less glistening than those of simple eruptions, and they are very rarely imbricated. They may consist of epidermis only, when they have a dull white color, or they may be formed chiefly of serum, when they are yellowish or brownish. The scales are never removed in large patches, as in psoriasis, since the inflammation is of such a low grade that exfoliation is slow and scanty.

The crusts of syphilitic pustules and ulcers are also peculiar. Those of small pustules soon dry, and are seated upon an indurated base; those of impetigo and eczema are placed in a slight depression of the inflamed skin. The crusts of larger pustules are dark brown or greenish-black, differing from those of ecthyma and scabies, which are yellowish-brown. If elevated, the syphilitic crust is seated upon a deep ulcer with brownish-red, infiltrated base and margins; in a simple eruption the ulcer is more superficial, its base is inflamed, and it has reddish, violaceous borders.

The crusts of rupia have no analogue in dermatology. They are of a brownish-black color, are conical and distinctly laminated, and they rest upon a surface which is bathed in viscid pus, or, as Zeissl puts it, "they swim upon and are kept afloat by pus." Their shape and structure are due in a measure to their slow formation.

The crusts of late syphilitic ulcers have a brownish-black color and a rough uneven surface, and resemble a dirty oyster shell; the crusts of lupus are of a bluish-brown mixed with yellow.

Peculiarities of Ulcers and Cicatrices.—Syphilitic ulcers may be round, oval, kidney-shaped, or of the form of a horse-shoe. The ulcers of lupus frequently assume similar forms, but the lesions of syphilis are generally more numerous, more extensively distributed and more polymorphous than those of lupus. The character of the crusts, the rapid progress and regular margins of the ulcer, and its proximity to a joint, the general history of the case, and its amenability to treatment, distinguish a syphilitic lesion. The margins of a lupoid ulcer are everted, softer and more violaceous, and are frequently studded with reddish-blue tubercles, while the surrounding tissues are much swollen. The cicatrices of syphilitic ulcers, especially where they have been numerous, are often diagnostic. They are distinctly rounded or oval, quite smooth and seldom traversed by fibrous bands except at the joints; they are frequently perforated with minute holes, the sites of former follicles, when they are more or less depressed, and when mature, are quite pliable. Their brownish-red color slowly fades from the centre to the periphery, until there remains a white shining surface, surrounded by a narrow areola of brown pigment. A lupoid scar, on the contrary, is generally irregular in outline; its surface, which is not always depressed, but may be on a level with the general surface or even elevated by the subjacent thickening, is very uneven and is crossed by numerous fibrous bands; it has not a shining appearance, and its areola is bluish-red. Finally, false keloid is more frequent upon lupoid than upon syphilitic cicatrices.

The cicatrices which sometimes follow papular syphilides are small, more or less aggregated, and at first pigmented. They are recognized by the situation and grouping of the scars, the coexistence of other lesions or their sequelæ, and by the history of the case.

The Odor of Certain Syphilitic Lesions.—Some observers claim that syphilis always gives rise to a distinctive odor. There is no doubt that the discharges from certain lesions possess an offensive and somewhat peculiar small. Mucous tubercles, when seated upon the genitals or in folds of integument, yield a secretion, often combined with that of sebaceous and sweat follicles, which has a sickening, penetrating odor certainly never perceived in other lesions. The odor in some cases of extensive gummatous and tubercular ulcerations, where the secretion is abundant and the patient uncleanly, is heavy and nauseating.

General Hints in Diagnosis.—In the diagnosis of syphilides the foregoing features collectively are of the greatest value. In every case the whole eruption should be reviewed; its extent, copiousness, configuration, and general appearance should be carefully noted; its mode of invasion, its concomitant symptoms, and its course should be determined by careful questioning and observation. With regard to the eruption itself we must observe whether it is composed of one variety or of several forms of lesion, and, if the latter, which predominates. For instance, in a roseolous eruption we judge of its extent, its tendency to development in certain localities, its configuration, whether the spots are isolated or grouped in rings; then we consider whether the spots themselves are in their early hyperæmic stage, or whether they have become pigmented or perhaps slightly papular and scaly. By comparing the number of erythematous and of pigmented spots we assure ourselves of the age of the rash, and whether its course has been rapid or chronic. We must also learn the general condition of the patient and whether other tissues have been affected.

In case papules, pustules, and scaling patches are associated with erythematous spots, we must decide which lesion predominates, and whether they are not mere phases of development of the same process. We may perhaps learn that the red spots become pigmented and slightly papular, while here and there are papules which change into pustules, vesicles, ulcers, or scaling spots. We observe whether the lesions have a tendency to unite and form patches. In this feature syphilis is peculiar, differing radically from most of the simple eruptions.

In case of several varieties of lesions which may undergo various

BIBLIOTECA FAC. DE MED. U.A.N.L.

changes, each one runs its course quite distinct from the other. This is quite different from what happens in simple polymorphous eruptions. We may have simple erythematous patches, papules and pustules associated, but they are related to each other in the development of one inflammatory process, and they have a tendency to blend and form a homogeneous eruption, as in eczema and scabies. In some cases of acne, papules and pustules are scattered together, yet a bond of union is always found to exist between them in their inflammatory, follicular origin, while they have other features which differ from those known to be peculiar to syphilis.

The Erythematous Syphilide.

(Syn. Syphilitic Roseola, Macular Syphilide, Exanthematous Syphilide, Syphilis Cutanea Maculosa.)

The erythematous syphilide is usually the earliest syphilitic eruption. It probably exists in all cases of syphilis, but may escape observation on account of its scantiness, or by reason of its forming only a part of an eruption which is chiefly papular or pustular.

The lesion consists of round or oval spots, with distinct or irregular outlines of an average diameter of about one-third of an inch. Their color varies from a delicate rosy pink to a decided red or even a purple hue. In some cases there may be only a mottling of the skin, or the eruption may be so faint as to be invisible except on careful inspection or in an oblique light. Exposure to cold brings the spots into prominence, while they disappear in the general hyperæmia of the surface from increase of temperature, and show themselves more clearly in the reaction which follows. At first the spots may be effaced by pressure, but about the end of the first month they may assume a grayish-brown or coppery tint, which is permanent. This tint appears earlier in exposed regions and on the legs, perhaps owing to peculiar conditions of the circulation. Sometimes the eruption disappears without this change of color. There is seldom either elevation or scaling of the surfaces of the spots.

In mild forms of this syphilide there is probably no other change than temporary capillary stasis and occasionally, in debilitated subjects, hæmorrhagic effusion. In chronic cases a proliferation of cells occurs, which is described by Biesiadecki as follows: "We find the walls of the capillaries studded at this point with numerous nuclei, projecting on their inner and outer surfaces, and surrounded by a row of cells here and there interrupted. These cells exactly resemble in size and structure white blood-corpuscles or the cells of dermatitis. They are situated around the vessels in a clearly bounded space. The adventitia of the vessels in the region of the macule incloses round and spindle-shaped cells. This exuberance of cells is most marked in the adventitia of vessels running toward the papillæ; their calibre is contracted, while that of the capillaries in the papillæ is somewhat dilated. Neither the cells nor the fibres of

connective tissue show any appreciable change, only here and there granules of brownish-yellow pigment are interspersed. The syphilitic macule must therefore be regarded as a disease of the blood-vessels as shown by the increase of their granular and cellular elements." Further microscopic observations have been made by Kaposi, who confirmed the occurrence of cell-changes in the capillary walls, and also observed cell-infiltration of the papillæ. It is quite probable that these combined changes occur in erythematous spots, which are more or less papular.

The incomplete papules, resulting from this limited cell-increase, mingled with the hyperæmic patches, form an eruption which has been called by Bazin "*roséole papuleuse*," and by Fournier "*roseola urticata*."

In very chronic eruptions several minute specks, of darker tint, appear on the surface of some of the roseolous patches, indicating a more intense hyperæmia at follicular openings. They are usually a little above the level of the patch and are frequently traversed by a hair, and their pigmentation is generally more persistent than that of the surrounding patch. Fournier calls this modification "*roséole piquetée*," or "*granular roseola*."

The erythematous syphilide requires a week or ten days for its complete development, but individual patches reach their full size in a day or two, and show no tendency to coalesce or to form circles. In rare cases of great intensity, or from any cause which stimulates the capillary circulation, the whole body may be invaded by the eruption in a single day.

The spots may be first seen in the vicinity of the umbilicus, soon extending to the thorax, sometimes following the line of the ribs, and finally, in severe cases, being closely crowded together over a large portion of the surface. In exceptional cases they appear first on the face. In mild eruptions the spots are most numerous on the sides of the trunk and on the inner surfaces of the extremities. On the genitals of either sex the macules are prone to hypertrophy, and hence we frequently see condylomata lata coexisting with roseolous patches in these regions. Similar changes are noticed about the anus, the umbilicus, the nose and the mouth, and in the fold of integument below the breasts. A limited number of patches may be found on the palms and soles, which may be diffuse or slightly elevated and scaly. The dorsal surfaces of the hands and feet are rarely invaded. A common region is the lower two-thirds of the forearms and the wrists. The neck is frequently exempt, or an eruption on the trunk may extend by occasional spots along the back of the neck to the scalp.

When the face is invaded the macules are developed more freely about the nose, mouth, and chin, and especially on the forehead at the border of the scalp,[1] where they are often associated with minute

[1] The early eruptions, especially the papular syphilide, are very likely to form a segment of a circle at the border of the scalp, which has been called the "*corona*

BIBLIOTECA FAC. DE MED. U.A.N.L.

follicular elevations, which become crested with sebum and may be mistaken for pustules. Many of the so-called "scabs" on the scalp have this origin. These patches at the margin of the scalp are often very irregular and confluent. This eruption on any part of the face is usually covered by fine adherent scales of epidermis or by thin yellowish-white crusts, which give it a smooth, shiny appearance.

The course of the erythematous syphilide is slow, and, except in cases of active invasion, it is not attended by special irritation or heat of the skin.

Its duration depends on the degree of the hyperæmia and on treatment.

A faint rash often disappears spontaneously, even within a week, under the use of mercury. After pigmentation has taken place, internal treatment needs to be supplemented by the external use of mercury in ointment, lotion, or, still better, the vapor bath.

A relapse of this syphilide may occur during the first year of contagion, and is generally less copious than the primary eruption. The macules are more localized and are likely to assume the circular form, which is never seen in the initial eruption, and they are attended by less febrile reaction. In certain cases as many as three and four recurrences have been observed, the forearms and gluteal regions being the parts most often affected.

Coexisting Lesions and Symptoms.—On account of its early appearance the erythematous syphilide is often associated with many other lesions, one of which is the fully developed initial lesion. Indurated ganglia may also be found, and hyperæmia or mucous patches of the fauces. Where two surfaces of integument are in contact, the confluence of erythematous spots may form large inflamed patches, sometimes mistaken for intertrigo.

They have sharply circumscribed margins and superficially ulcerated surfaces, which secrete a viscid offensive fluid. They are often accompanied by papules about the hair follicles, or even by pustules and condylomata lata. Alopecia and affections of the nails sometimes occur at this period. Slight periostitis and, in bad cases, osseous affections may be present. Superficial scaling of the palms or even of the soles may be observed. Iritis is rarer than in a general papular eruption. In a person with a long prepuce and of uncleanly habits, patches of erythema on the mucous membrane of the glans may result in quite destructive ulceration.

Diagnosis.—The diagnosis of the erythematous syphilide is to be made in its form of hyperæmic patches, in its pigmented condition, and in its ringed form.

In its hyperæmic stage it may be mistaken for rubeola, scarlatina, or the erythema following the ingestion of balsams or the use of mercury.

The mode of invasion, the absence of severe general symptoms, and

Veneris." It is a mistake to suppose that the papular eruption is the only one which may be developed in this way.

the circumscribed and indolent character of the rash, will usually enable us to distinguish it from rubeola and scarlatina; moreover, the presence of catarrhal and conjunctival symptoms in the former, and of gastric and throat symptoms in the latter, will be of assistance.

The rash caused by cubebs, copaiba, tar, etc., is always attended by high fever and serious gastric disturbance, and the patches are many of them very large and œdematous, or like the wheals of urticaria. It soon fades on cessation of the exciting cause.

An eruption may be caused by either the internal or external use of mercury. It appears suddenly in the form of very large hyperæmic patches, of a bright red color, which soon become dull and quickly fade, leaving no trace. It is not infrequently mistaken for a relapsing eruption.

One of the most frequent errors in the diagnosis of syphilitic eruptions is that of confounding the pigmentary stains of the erythematous syphilide with tinea versicolor. They somewhat resemble each other in color, but that of tinea is more yellow, and many of its patches are very large, and they are always accompanied by some extremely small ones. Tinea is, moreover, slightly pruritic, and its scales contain the *microsporon furfur*. The patches of tinea are always found over the sternum, where syphilitic eruptions are rare, and they are much less scattered than those of the syphilide.

In rare instances of slight elevation and scaliness, the rings of the erythematous syphilide may be mistaken for tinea circinata. The syphilitic rings are much more numerous, do not increase in size, and the area of inclosed skin is unaltered. The scales of tinea circinata always contain the parasite *tricophyton tonsurans*.

The Papular Syphilides.

This most important dermal lesion of syphilis is composed of circumscribed infiltrations into the superficial layers of the skin, and presents two varieties, the *conical* or *miliary* and the *lenticular* or *flat*.

It may constitute the first symptom of the secondary stage, or it may be combined with the erythematous syphilide. In relapses it frequently occurs alone, or is by far the larger proportion of a recurring eruption. It may be seen even in the tertiary stage, and it merges into the tubercular syphilide by intermediate grades of papulo-tubercles. Some of these intermediary papules are attended by an epidermal proliferation, and have therefore sometimes been erroneously called "squamous syphilides." The various changes of form and distribution which the papules undergo sometimes give them a strong resemblance to simple skin lesions.

The Miliary Papular Syphilide.

The *miliary papular syphilide* has two distinct varieties, one composed of *large* and the other of *small papules*.

Some of the *small papules* are about the size of a pin's head, while

BIBLIOTECA FAC. DE MED. U.A.N.L.

others are two or three times as large. They consist of distinctly limited, conical or rounded elevations of the skin, sometimes umbilicated, and, in their early stages, they have a deep pinkish-red color. When forming the first eruption of the secondary period, or an early relapse, they are distributed over the whole body, sometimes closely packed together, and particularly copious on the forehead, about the nose and chin, on the back of the neck, on the outer surfaces of the extremities, and upon the scapular and gluteal regions. The papules may be arranged in groups, in the form of circles or segments of circles, or like the letter S or the figure 8. Sometimes the papules composing rings, which may have a diameter of half an inch or two inches, fuse together and lose their individual shape. The circular form is assumed only in the regions referred to, while elsewhere papules may be seated without definite order.

In a general eruption papules may be seen on the backs of the hands and upon the scrotum and penis, where they usually become excoriated and are transformed into condylomata. Unlike the flat papules, these are rarely accompanied by condylomata about the anus in the male and the vulva in the female. After frequent relapses the papules are generally less numerous and less confined to particular regions, while the ring form becomes a more prominent feature. When the eruption occurs late in the secondary period it may be seen in but one region, and may even be unsymmetrical.

This eruption usually begins about the face and neck and is fully developed at the end of two weeks. In some instances its evolution is so rapid that it has been called the "acute papular syphilide." In late relapses the papules appear as slowly as any other syphilitic eruption. Many of the papules are seen to be at the openings of follicles, a feature which is more noticeable in this than in any other form of syphilitic papule.

After their complete development the papules remain unchanged for a time. In some cases new papules, and exceptionally pustules, appear among the old ones. Soon their color changes to a sombre brown, and finally to a coppery hue. Small scales of epidermis, frequently in the form of rings which correspond to the margins of papules, are detached by the infiltrative process beneath. This feature was regarded by Biett, who first described it, of considerable diagnostic importance. A marked tendency to further desquamation is observed only in chronic cases and in regions where the epidermis is thick; it is sometimes so decided as to resemble the early stage of psoriasis.

Frequently a few of the papules are converted into vesicles or pustules by the accumulation at their apices of a minute quantity of serum or pus. They may remain in this condition for a long time. Generally the fluid dries and forms a minute crust which may fall off spontaneously, leaving the papules apparently in their elementary state. In some cases pustules form, which may dry or become ulcers.

Jullien (*Mal. vénériennes*, p. 716) says that sometimes no fluid escapes on puncture of the apparently vesicular apex of one of these papules. In such case he thinks the appearance is due to "œdematous softening of the neoplasm." We have observed this feature less frequently than Jullien.

The occurrence of distinct groups of papules which have undergone these changes, generally on the face, about the mouth, and on the forearms and backs of the hands, has perhaps led some authors to admit the existence of a vesicular syphilide.

In some instances papules about the nose and mouth have a yellow crust composed of sebaceous matter from the follicles around which they are developed. On account of the appearance of the crust and the superficial infiltration of the papules the case might be mistaken for one of seborrhœa.

When uninfluenced by treatment the course of the eruption is chronic. In its early stage it yields slowly to treatment, but after long persistence it becomes very obstinate and requires local as well as general treatment. Its rapid and early disappearance is desirable, since permanent atrophic spots like those of variola, remain after a lesion which has had a long existence. These spots are pigmented, and they become white only after several months. Pigment may also be deposited when atrophy has not occurred.

The diagnosis is generally easy, at least in the early stage. The eruption may be mistaken for the punctate form of psoriasis, or for certain cases of lichen pilaris and lichen planus.

In psoriasis the papules tend to form patches of an inch or more in diameter, and the scales are copious, silvery and imbricated.

Lichen pilaris is an inflammatory affection, chiefly of hairy regions, and is accompanied by intense pruritus, and the papules often form patches of thickened skin.

In lichen planus the papules are flatter, less uniform, more commonly umbilicated, are always pruritic, and are more likely to lose their original character by confluence.

Moreover, with the syphilide we have the specific history and possibly the co-existence of other and distinctive lesions.

In addition to the small conical papules, there are others as large as peas, markedly conical, and having an elevation of about a line. They rarely appear in large numbers, or constitute an early general eruption, but are found at the time of a relapse mingled with the smaller papules, with pustules, or with an erythematous syphilide. They are more profuse on the back and buttocks than elsewhere. Their evolution is slow. Their bright red color soon fades, and they are quite apt to pustulate and form ulcers. They have no orderly arrangement either in groups or in circles. They yield more readily to treatment than the small papules, and seldom leave atrophic and coppery spots.

This form of papular syphilide may be mistaken for acne, especially on account of its appearance on the back. In acne the lesions

BIBLIOTECA FAC. DE MED. U.A.N.L.