are most abundant about the face and shoulders; they vary greatly in size, and are accompanied by more hyperæmia. Acne usually begins about puberty, and has a history of many recurrences.

The Lenticular Papular Syphilide.

There are two varieties of flat papules caused by syphilis—the *small* and the *large*. The *small papules* frequently occur in the form of a general eruption; this is rarely true of the large papules, which are usually seen concurrently with a small papular eruption, an erythematous, or perhaps a pustular syphilide. These two forms of papules present striking differences.

The Small Flat Papular Syphilide.

The *small papules* begin as minute red spots, which rapidly increase until they reach a diameter of one-eighth to one-fourth of an inch, and an elevation of one-third to one-half a line. They are either round or oval, have flat surfaces, and rounded and distinctly limited margins. A few papules may be slightly depressed at the centre, but we do not find them surrounding follicular openings or pierced with hairs. In the early and general eruptions the papules are scattered, and show no tendency to fuse together. In relapses they are less numerous, and are more likely to be grouped and arranged in a circular form.

Mode of Distribution.—The papules are first seen about the shoulders, or at the back of the neck, or on the sides of the thorax, and are soon followed by others on the forehead at the margin of the hairy scalp, with perhaps a few on the face, about the nose and mouth, and on the anterior surface of the neck, rarely on the ears. At the same time, or soon after, the trunk is invaded, particularly the back, and the papules may follow the line of the ribs. As a rule, the supra- and infra-clavicular regions are wholly spared. The papules are copious in the hypogastric region; but few are seen over the sternum; they are numerous over the anterior surface of the shoulders, but comparatively sparse on the outer surface of the arms, while they are more numerous on the inner or flexor surfaces, especially near the joints. Few are seen on the dorsum of the hands, while the palms are more freely supplied. They are unusually numerous on the gluteal regions, and are not infrequently found upon the penis, the mons Veneris, and in the inguinal region. They are more plentiful on the inner than the outer aspects of the thighs, and they either do not extend below the knees, or are sparsely distributed upon the inner surfaces of the legs and sometimes upon the soles. The face is spared by this syphilide more frequently than by the small miliary variety. It sometimes assumes the form of the so-called "corona Veneris," and occupies the forehead where the hat presses; it is seen upon the alæ nasi and about the mouth, and shows a marked tendency to development near the junction of the skin with

mucous membranes. In rare cases the papules are very copious and hypertrophic upon the face, where they cause a peculiar expression, similar to that sometimes seen in true leprosy, which is called by some authors "syphilitic leontiasis."[1]

The color of the small flat papules varies in different regions of the body, and in different persons. In their early stage it is a pinkish-red, which soon becomes brownish or coppery; this change occurs first on the face, especially the forehead, then on the legs. In persons with delicate skin or feeble circulation the color is at first very light red, which changes to a light yellow tinged with brown. On the legs, the papules sometimes become of a purple color, owing to blood stasis or effusion. This condition may be general in broken-down or scorbutic subjects. In rare cases some of the papules on the face are of the color of the normal skin; they are always accompanied by others which are colored. On parts freely supplied with sebaceous follicles some of the papules are covered by a thin yellowish crust, which, being easily removed, exposes a shining surface with no evidence of ulceration. This crust, formed of epithelium and sebaceous matter, is generally coextensive with the papule.

There is a marked difference in the amount of scaling of the papules in different persons and in different parts of the body. The epithelium at the border of fully developed papules may be detached and form a fringe around them, as in the case of miliary papules. The scales on the surface of the papules are generally small, adherent, and not of the silvery white color of those in psoriasis. On surfaces where the epidermis is thick the papules are not infrequently lost in a desquamating patch; this is apt to be the case with late papular syphilides of the palms and soles, which have received the name "syphilitic psoriasis."

These papules are of softer consistence than the small miliary papules, and do not give to the finger the rough, firm sensation of the latter.

In exceptional cases a peculiar necrotic change takes place upon the surface of many of the papules. Their epidermis is thrown off either by scaling or by molecular decay, and is replaced by a dirty-brownish membrane of a fibrous nature, which is removed in fragments or in mass, and exposes a granular ulcerated surface. This seems to be a diphtheritic deposit. We have seen but few instances of this complication, and only in cachectic subjects.

Like all other syphilitic papules these disappear by absorption of their cell elements. Under the use of mercury the process is rapid; otherwise the papules slowly flatten, and are gradually replaced by copper-colored spots of pigment, which, though quite persistent, are not so obstinate as those left by the small miliary papule. Although internal treatment causes the absorption of the papules, it is almost powerless against the pigmentation left by them.

[1] A similar but more marked condition obtains also in certain tubercular syhpilides.

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As a rule atrophy of the skin does not follow the absorption of the small flat papules, although in very chronic cases, minute depressed cicatrices result from absorption of some of the cells of the skin itself, as well as of those of the papules. This occurrence is more common on the face than elsewhere.

The invasion of this syphilide is usually subacute, but it may be hastened by excessive heat, hot baths, alcoholic drinks, or similar influences. It rarely appears as rapidly as the small miliary papular eruption, and is never accompanied by itching. A period of a week or ten days usually elapses before the eruption is complete. The number of papules varies; when this syphilide is the first manifestation upon the skin, as it is in about twelve per cent. of the cases, the papules are very numerous, so that the tip of the finger can scarcely be laid upon the skin without touching one or more of them. This may be true also in a first relapse following an erythematous syphilide.

Although the eruption may be less copious it is usually widely distributed. Relapses are quite amenable to treatment. Uninfluenced by mercurials this syphilide is very indolent; while some papules are undergoing resolution, new ones appear, so that all stages of development may be represented in a single case. Treatment quickly dispels the eruption and influences the copiousness of succeeding lesions. This fact is particularly noticeable in private practice, where patients seek advice early; with careless persons, on the contrary, a relapse may be extensive and profuse.

A relapse of this syphilide may be expected at any time within two years after infection. In one occurring after the sixth month the papules are limited in number and extent, and their color is generally darker than that of an early rash. A few papules may appear over the trunk, upon the face and on the inner aspect of the limbs near the joints, either scattered or in a ringed form. In relapses of this syphilide the papules tend to appear on the elbows and knees, sometimes in the form of circles or segments of circles, and perhaps accompanied by papules, either scattered or grouped in rings, about the shoulders and trunk. Psoriasis presents certain similar features and is particularly prone to appear in these regions. The syphilide may be found upon the elbows alone; it is rather unusual to see it upon the knees and not upon the elbows. Generally a few papules are scattered over the body.

Careful examination of the patches shows that the rings are formed either by fusion of the papules or by their interrupted distribution. With care it is seen that the basis of the eruption is papular, and that there is no morbid change in the encircled area of skin. This is quite different from the condition in psoriasis, in which a papule increases centrifugally, until it reaches a diameter of an inch or more, when evolution takes place at the centre of the lesion, the periphery remaining unchanged.

Other points of distinction are yet to be spoken of.

Coexisting Symptoms and Lesions.—When this eruption is the first dermal manifestation, it is usually accompanied by several others, such as buccal and pharyngeal lesions, swelling of ganglia, alopecia, pains of various kinds and perhaps iritis. The latter affection occurs more frequently with this than with any other form of papular syphilides. Having a marked tendency to relapse at any time during the secondary period, this syphilide may coexist with any of the manifestations peculiar to that period.

Diagnosis.—General eruptions of this syphilide are so peculiar in the distribution, shape, and appearance of the papules, and are so often accompanied by other syphilitic symptoms, that the diagnosis is usually clear. In some sparse eruptions which are especially chronic, and in which papules are extraordinarily scaly, there may be some doubt between syphilis and psoriasis in its guttate stage. The latter disease is essentially scaly, and the patches are not uniform in size; it generally begins in early life and recurs in subjects apparently healthy; its scales are silvery, imbricated and plentiful, while those of syphilis are of a more sombre hue, are not imbricated, and usually not very copious. In psoriasis there is a history of numerous similar eruptions, in syphilis there may be relapses of similar papules, but they are likely to be less copious and more localized with each succeeding outburst. In syphilis there is the history of the initial or other lesion and perhaps the coexistence of other symptoms and usually a condition of ill-health. Arsenic cures psoriasis but not syphilis; syphilis is curable by mercury, an agent which is powerless in psoriasis.

In those cases in which the papules are developed in a ringed form upon the elbows and knees, the general distinctions just given apply. On examination of the rings or segments of rings they are found to be formed by the fusion of individual papules. They are less scaly, more copper-colored, and more sharply defined than the rings of psoriasis, which are formed by absorption of the centre of a circular patch and which continue to increase in diameter.

The Large Flat Papular Syphilide.

The large flat syphilitic papules are either round or oval and have a diameter of three-eighths to one-half of an inch, and exceptionally of fully one inch. They begin as minute spots, which as a rule rapidly increase. Their surface is flat, but occasionally there is a well-marked sloping depression at the centre. They are distinctly elevated, with rounded, sharply-defined edges. A few small adherent scales lie upon the surface, and at the margins of the papules an epidermal fringe or rim may be seen. They generally have a decidedly red color, which soon becomes coppery. In rare cases they are bright crimson red, and exceptionally they have a deep purplish-red tint. They run a chronic course, and cause neither pain nor itching. The surfaces of the papules in rare instances undergo

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superficial necrosis and become covered with a thin, dirty-looking diphtheroid membrane. Such an occurrence is always indicative of a depressed condition of the system, and of a severe form of the disease.

This eruption occurs under a variety of circumstances. In some instances a few papules may be found with an erythematous syphilide or an eruption of small flat papules on the forehead, the neck, and about the genitals. In rare cases this syphilide is the first eruption, and it then resembles the small flat variety in its mode of appearance and its course. It occurs upon the palms and soles with about the same frequency as the latter, and in these regions it may develop the so called palmar and plantar psoriasis. When occurring as a first general rash, this syphilide shows no tendency to a circular arrangement, and, although the papules may be more closely aggregated on such parts as the face, neck, shoulders, inguinal and gluteal regions, and near joints, they do not coalesce except in parts continuously irritated. Owing to irritation their area sometimes becomes greatly increased.

In general this syphilide belongs to the middle and late periods of the secondary stage, and is with good reason classed by some French authors as an intermediary syphilide. While, therefore, it is rarely observed as the first rash, it is often met with as late as the second and even the third year of syphilis. As a rule the earlier its appearance the more copious is the eruption. Appearing on the subsidence of a first general rash, it may consist of quite a large number of papules scattered irregularly over the body; such a rash may be composed of less than two hundred papules, or even one-third that number. Provided treatment is followed, relapses are composed of even a more limited number of papules, which then show a tendency to appear on the palms and soles, on the face, abdomen, and near joints, seldom, however, in an annular form. About the beginning of the second year, sometimes later, the distribution of this syphilide is even more limited. A few papules appear on the arms or palms, run a chronic course, and are followed by a few on the abdomen, thighs, or forehead. In late eruptions, where the papules are so few, they are often much larger than those of earlier stages, though they rarely exceed a diameter of one inch. In these cases the term papulo-tubercle is perhaps more strictly expressive of the character of the lesion.

When seated on the face and on parts freely supplied with sebaceous follicles, as in the case of the small flat papules, thin, yellowish, non-adherent crusts are sometimes observed on the surfaces of these papules. Not infrequently the margins of some of them become elevated into distinct rims. Again, an annular crust, of a dirty yellow color, may occupy the periphery of a papule. Sometimes this rim is so yellow as to give the impression that it is composed of pus, but its removal shows no ulceration beneath, and no pus-cells can be found in it. Exceptionally superficial ulceration

may occur on some of the papules, which, in broken-down subjects, are sometimes entirely converted into ulcers. Sometimes, on freely movable parts, superficial or deep fissures may form.

A rare metamorphosis of this syphilide is sometimes seen. The papules become somewhat larger and more elevated. At first their surface is slightly granulated, the appearance suggesting an extraordinary swelling of the *papillæ cutis*. The surface soon looks warty and resembles a raspberry. The prominences are smooth and red, and vary greatly in size, and between them there may be slight ulcerations, from which escapes a secretion, which dries and forms a crust. Sometimes, when copious, the secretion has a sickening odor. When thus hypertrophied these papules may be elevated to the extent of two or three lines or more; their surface may be level or markedly rounded. This condition is most prone to occur upon the face, on the scalp, about the shoulders and near the genitals. When thus changed this syphilide has received the names "frambœsoid," "vegetating," and "verrucous." The extent of the process varies, in some cases being limited to a few papules.

A similar feature is sometimes observed on the surface of flat condylomata, and in a more hypertrophic form on some syphilitic tubercles.

Upon surfaces that are in coaptation or covered with moisture, as between the toes, around the navel, at the margin of the nostril, and on the perinæum, these papules may become superficially excoriated or transformed into condylomata lata. This is well seen in some cases of papules on the thighs of women. Those on the lower part are simply scaly, those near the genitals are superficially eroded and emit an offensive secretion, while those on the vulva are truly condylomatous.

Under mercurial treatment the pupules composing this syphilide are, as a rule, slowly absorbed, a more or less deeply pigmented spot being left. The earlier treatment is begun, the less in degree will be the resulting pigmentation. The later and more scattered eruptions are often more rebellious. They remain indolent, causing more or less desquamation; in which feature, as well as in their color, they sometimes resemble psoriasis.

Not uncommonly, in the retrogressive stage of these papules, particularly in late eruptions, absorption of the centre of the lesion occurs, leaving a ring which may be scaly, and which is itself finally absorbed without showing any tendency to centrifugal increase.

When occurring as the first general eruption, this syphilide coexists with the numerous symptoms peculiar to the early period. When of later occurrence it is not infrequently accompanied by pustular eruptions on hairy parts, iritis, alopecia, onychia or perionychia, condylomata and often by cachexia. When of very late appearance it may be the only manifestation of the disease, and it often recurs in a limited degree, to be finally replaced by lesions of the tertiary period.

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Prognosis.—The early appearance of this syphilide indicates an active and severe form of syphilis, and calls for prompt and careful treatment, otherwise the supervention of cachexia and of tertiary lesions may be expected. A relapse of the eruption indicates continued activity of the disease. As to the eruption itself, its disappearance is merely a question of time and of treatment.

Diagnosis.—A general eruption of this syphilide presents such distinctive features that errors in diagnosis are scarcely possible. Where it occurs in limited numbers and runs a chronic course, particularly when there are several outbursts of papules at short intervals, no other lesions being visible, it may be mistaken for psoriasis. The question may be still further complicated by the appearance of papules upon the elbows and knees. A distinction can, however, generally be made by attention to certain points. In syphilis the papules have a uniform size not seen in psoriasis; in psoriasis the spots are likely to blend and form gyrate patches, while in syphilis they gradually pass away after reaching maturity. The color of the psoriatic patches is pinkish or deep crimson; that of the syphilitic papules is deep brown or dull crimson. It must be confessed, however, that a diagnosis must, in some cases, be established by other features. The scales of the syphilitic papules are not as copious and usually not as silvery as those of psoriasis; they are simply more or less adherent flakes of epidermis. By scraping a patch of psoriasis much epidermal debris is collected, and there is exposed either a shiny, thin pellicle covering the patch, or a granular bleeding surface. Similar treatment of a syphilitic papule gives much less epidermal debris, and shows that we are tearing a solid tissue. In the ringed form, from absorption of the centre of the papules, the resemblance to psoriasis is sometimes striking, but the scantiness of the scaling, the uniformity in size of the rings, and their stationary condition are in contrast with the abundant scaling, the varying size of the rings and the tendency to centrifugal growth and fusion seen in psoriasis. The sharply defined border of syphilitic papules is seldom observed in psoriasis. Moreover, in syphilis there is a history of some other symptom or lesion, or there may be other specific lesions on the body at the time. There may also be cachexia in syphilis, while patients with psoriasis are generally remarkably healthy. The age of the patient is sometimes a point of importance. As a rule psoriasis begins in early life, and only exceptionally after puberty. The syphilide is more common after puberty on account of the more frequent occurrence of syphilis after that period. Finally, mercurial treatment has no effect upon psoriasis, while it is especially beneficial in this form of syphilide.

Scaling Papular Syphilide of the Palms and Soles. (Syphilitic Psoriasis of the Palms and Soles.)

Papular syphilides of the palms and soles are often peculiar and difficult of diagnosis. They may occur at any time in the secondary

period, or may coexist with tertiary lesions; they run a chronic course, unaccompanied by pain and itching, and are generally rebellious to internal treatment.

The erythematous syphilide is often developed on the palms in scattered spots, which have a deep red color, are slightly elevated, and covered by a layer of epidermis. In favorable cases, subjected to treatment, scaling soon occurs, leaving a smooth, rosy, slightly depressed surface, surrounded by an undermined rim of epidermis. The mode of development of these spots, when not treated, will be described later.

In a general eruption of flat papules a few sometimes occur in the hollow of the palms and soles. They are small, decidedly elevated, and have a deep red or purple color. Exceptionally they are very numerous in the above regions. They disappear under treatment, but, if left to themselves, they become chronic.

In some cases, usually early in the secondary period and coexisting with dermal or other manifestations, or perhaps being the only evidence of syphilis, a varying number of small, firm, hard, colorless elevations or miniature corns appear on the palms. Usually there are about a dozen on each hand; there may be only two or three, or they may be much more plentiful. They cause neither itching nor pain, but are in some instances tender under pressure. They run an indolent course, and disappear chiefly by scaling. They are composed of dense masses of epidermal scales, which can be dug out with a knife. Usually they are of little importance.

The well-marked scaling syphilides of these parts may appear as early as the third month of syphilis, at the time of a relapsing eruption, or even at a much later period. They usually begin during or at the decline of an eruption of the flat papular syphilide, but they may be developed independently. In the hollow of the palm or sole a few flat papules of a diameter of one or two lines appear. At first the elementary lesion can be distinctly recognized, being elevated, sharply outlined, and of a deep red color. If treatment is neglected they soon become flattened, and lose their color and well-defined margins. Meanwhile other papules may be formed on the borders of the palms, which likewise soon lose their characteristics. They all increase in size, and may form irregular patches by fusion. In severe cases the entire palm and the fingers may be invaded, when we find either a number of small patches or a large one in the hollow of the hand, with smaller ones around it.

These patches constitute the true scaling syphilide of these parts, and are called by most authors "syphilitic psoriasis of the palms and soles." By careful examination we find general thickening of the epidermal layer, with much scaling and redness of the surface. The papules are frequently seated in the furrows of the hand, which, in severe cases, may be converted into superficial fissures or "rhagades." When thus developed, this syphilide may persist for months or years,

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