

which frequently form, have a greenish-black color. About the nose much destruction is often produced, either limited to the skin or involving the cartilage and the bones. Erysipelas may complicate gummous ulcers of this region, and in rare cases, phagedæna, which has been known to destroy the greater part of the face.

The gummous syphilide of the arms and forearms is not especially peculiar, but in most cases, when it is seated over nerves, severe neuralgias are produced.¹ In somewhat rare cases gummy deposits in the fingers produce a swelling resembling that occurring in a specific lesion called *dactylitis*. Although prone to appear near the joints, this syphilide seldom invades the articulations themselves. In one case, however, a gummous tumor over the sterno-clavicular articulation ulcerated, destroyed the joint and perforated the lung, death resulting. In another case, a gumma, the size of a hen's egg, was developed in an intercostal space, eroded the bone and perforated the pleura. The liability to this accident, in the case of gummata situated on the side of the thorax, should lead to the adoption of very vigorous treatment.

Gummata not infrequently form in the female breast, less commonly in both breasts. The importance of their diagnosis is here very great; failure to recognize their true character may lead to unnecessary surgical interference. They appear, as elsewhere, slowly; they are only moderately hard and are painless. There is no retraction of the nipple, and the axillary glands are unaffected. The ulceration which occurs is characteristic and quite unlike the indurated, fungoid ulceration of cancer. In all cases of limited tumors of the breast, a suspicion of their gummous character should be entertained, especially when the patient is young or of middle age. A mistake is liable to occur only when the gumma is very large and of unusual depth.

The cellular tissue of the buttocks being very copious, gummata of the gluteal regions often attain remarkable size and depth. I have seen several instances in which the sharply-cut walls of the ulcer led down to a base four inches from the surface of the skin. The genitals and thighs are very apt to be attacked by these tumors, which, upon the penis, scrotum, and labia majora, are often

¹ Gummata may be situated in almost any region over a nerve and may then cause pain. Ricord reports one case in which a gumma of the size of a chestnut, seated in the groin, caused pain in the crural nerve; and another in which two such tumors, seated in the course of the ulnar nerve, provoked severe pain in the forearm and in the two inner fingers. Nélaton reports two cases; in one a gumma of the axilla, besides causing neuralgia in the whole arm and shoulder, produced by compression a souffle in the axillary artery, venous stasis, and œdema of the extremity. The tumor speedily subsided under the use of iodide of potash. The second case was that of a lady who had consulted several physicians on account of pain in the foot, which was found by Nélaton to be caused by a gumma compressing the plantar nerves. In a case seen by Fournier, two gummata were found, one upon the median and the other upon the radial nerve, each of which was the cause of pain, numbness, and muscular weakness. In another case, seen by the same author, a small gumma over the track of the supra-orbital nerve gave rise to considerable pain.

almost ligneous in consistence. The perinæum is sometimes the seat of circumscribed gummy deposit. I have seen one case in which urethral fistula resulted from ulceration of a gumma in this region.

Little need be said of gummy tumors of the thighs beyond the fact that they are often of very large size. When they occur on the legs, the question of diagnosis is particularly interesting. The ulcerating gummy tumour is usually seen on the upper and middle thirds of the leg, and where the connective tissue is abundant, differing markedly from simple ulcers, which most commonly form on the lower third, and over a bony surface. They may appear lower down, but usually where the tissues are lax, and seldom over a body surface. They are often multiple, but more than four are rarely observed. They select the sides of the leg rather than the posterior aspect. They are always surrounded by intense hyperæmia, and frequently, late in their course, they resemble non-specific ulcers, especially the varicose. Their edges become rounded and callous, and their surface is studded with granulations, thus losing their characteristic features.

In some cases of precocious evolution, groups consisting of six or a dozen of these gummous tumors, form upon the legs, especially near the knees, less frequently upon the buttocks, and even on the forearms and forehead. They rapidly invade the skin and form ulcers, which are at first extraordinarily active, but soon pass into a chronic state.

The extensive hyperæmia which usually accompanies these ulcers of the leg, is the cause of localized œdema. In very chronic and extensive ulceration the œdema begins about the ankle, and involves a portion or the whole of the leg, which becomes swollen, hard, and brawny, the integument above the ankle being thrown into folds. This condition, which is very obstinate, and altogether resists internal treatment, resembles elephantiasis Arabum. When their edges become thickened and callous, these ulcers do not extend rapidly, but persist for many years. Their base is covered by a layer of greenish-black slough, and from it exudes a thin, fetid, bloody secretion.

Phagedæna is happily an infrequent complication of this syphilide. In broken-down subjects the ulceration rapidly destroys the skin and subjacent tissues, sometimes even denuding the bones. The process is extremely painful, and is attended by constitutional reaction, which sometimes reaches a typhoid condition. The parts most subject to this complication are the face, feet, and genitals. Unless promptly checked there may be great destruction of tissue.

This syphilide may appear within the first year of syphilis, but it is generally a late symptom, appearing at any time from the third to the fifteenth or twentieth year. Fournier reports a case of gummy tumor of large size, which was developed fifty years after infection, and was cured by iodide of potash.

The *prognosis* is influenced by the date of the appearance of the

syphilide, its extent, and the general condition of the patient. Its early and malignant appearance indicate an active and severe form of syphilis, in which visceral gummata are to be feared. Although only one or two gummous tumors or ulcers may be present, and the general health is not much affected, thorough internal treatment is none the less necessary.

The *diagnosis* is to be made in its stages of tumefaction and of ulceration. When it exists as a movable, subcutaneous tumor, it may be mistaken for a fibrous, a sarcomatous, or a fatty tumor, or perhaps an enlarged ganglion. The syphilitic lesion is usually multiple, and is not compressible like the fatty tumor, nor as hard as the sarcoma. Sarcomata tend to attach themselves to subjacent parts; the gummy tumors invade the skin. The history of the case, the absence of pain in the tumor, and its situation, may be of assistance. Tumor-like infiltrations upon the face, in the female breast, about the genitals, near joints, and wherever connective tissue is abundant, should always, in case of doubt, be subjected to specific treatment. Numerous cases have occurred, particularly with French surgeons, in which mixed treatment has dissipated tumors condemned to excision.

The general appearance, situation, and history of gummatous ulcers are generally sufficient to establish their character; but sometimes, especially on the face and lower extremities, they may be confounded with ulcerating lupus, or with simple eczematous or varicose ulcers. Lupus begins as small tubercles of the skin, which slowly ulcerate and become partially incrustated, and it extends by the formation of new tubercles, which in turn ulcerate. Lupus usually begins in early life, and on the nose.

Eczematous ulcers are always preceded by eczema of the skin, which lies tense over a bony surface. They are painful, superficial, always accompanied by a good deal of inflammation, and are seated, as a rule, on the lower third of the leg. Similar general features are observed in varicose ulcers, together with enlarged veins and more or less oedema.

THE SERPIGINOUS SYPHILIDE.

This syphilide creeps over large surfaces by ulcerating at the periphery of patches while it heals in the centre. It may occur as early as the second, or as late as the tenth or fifteenth year of syphilis, possibly later. Its course is very chronic, and, although unattended by pain, it frequently causes great inconvenience. Its effects on the skin may be slight, or it may leave disfiguring cicatrices. There are two varieties of this lesion, a superficial and a deep.

The *superficial serpiginous syphilide* begins as a pustule, generally of the impetigo-form or of the variola-form syphilide. In its early stage it consists of a superficial ulceration, which has no characteristic features indicative of its future course, but which extends in the shape of a round or oval patch. If treatment, and particularly local treat-

ment, is not employed, the process continues and crusts form, until the patch reaches a diameter of about two inches; granulations then spring up from the centre, and the crust falls off except at the periphery, where it adheres as an encircling ring. Thus is formed not a continuously incrustated surface, but a ring of crusts inclosing a more or less hyperæmic area of a round or oval shape. The color of the crusts is usually yellowish-brown or greenish-black, and their thickness about one-tenth of an inch. The underlying surface is smooth, of a grayish red color, and ulcerated at the margins. Around the edges is a narrow, red areola. The ulcerative process slowly progresses at the margins of the patch, a rim of crust at the same time forming. Healing of the inclosed surface keeps pace with the peripheral extension of the ulceration, so that the width of the crust, varying from half an inch to an inch, is steadily maintained. The centre of this surface is blanched, its margins are always red, and they merge gradually into the ulceration. This process may continue many years, and involve extensive surfaces. When healing begins, the crusts become harder and darker, and the redness of the central patch and of the areola diminishes. Then segments of crusts, having been lifted by the granulations beneath, fall off, and expose an ulcerated ring. Unless cauterized with a solution of nitrate of silver, as it should be, it may persist for a long time. At first the ulcer generally increases throughout its whole periphery; subsequently, it may increase only in one direction, thus becoming oval or reniform. The extension of the ulcer is largely influenced by the tissues on which it is seated. Thus an ulcer on the inner surface of the forearm creeps up the arm much more rapidly than towards its outer surface, where the tissues are firmer; and thus a long, oval ulcer is formed. A similar occurrence is observed on the thighs, while on the face, where the tissues are more uniform, the ulcers are generally round. The result of this superficial ulceration may be simply coppery pigmentation, which lasts several months, or very slight atrophy of the skin. The ulceration may even be extensive and protracted, and yet induce wonderfully little structural change.

The *deep serpiginous syphilide* has for its focus of ulceration, one of the late or tertiary lesions, such as a tubercle, an eethyma-form pustule, or an ulcerating gumma. Whatever the starting point, there is soon developed a deep, sharply cut, active ulcer, with undermined edges and a coextensive crust. This ulcer increases in size, more or less rapidly, until it attains a diameter of two or three inches, when changes, similar to those observed in the superficial variety, may occur. The crust becomes thin at its centre, and thick at its margin; the thin portion soon falls off, leaving a round, deep-red cicatrix, surrounded by a thick, greenish-black crust, less than an inch in width and quite thick. When this syphilide is fully developed, and has attained a diameter of from four to six inches, its changes are more marked. In the centre is a round or oval patch of cicatricial tissue, having a coppery-red color, and as yet firmly attached to the

subcutaneous connective tissue. This is completely inclosed by a ring of crust. The ulcerative process is not equally active at all parts of the ring, hence result certain modifications in the shape of the crust. The ulcerating ring, which encircles the central cicatrix, forms a furrow half an inch to one inch in width, and, at its most active portions, a line or more in depth; it has a foul, grayish-red floor, and sharply cut, somewhat everted, and undermined edges, which have a deep red color, and are continuous with an areola of similar tint. Portions of this ulcerating furrow may be partially filled by granulations, or even entirely cicatrized. Over the more active segments, there is a yellowish-brown crust, slightly depressed below the level of the skin, and which may be raised as a film from the surface. In portions further advanced towards healing, the crust is thicker, harder, slightly above the surrounding level, and of a greenish-brown color; continuous with it, on parts where the process is quiescent, or where healing is nearly complete, the crust is greenish-black in color, is hard and adherent, and its base on a level with the skin. Thus we can always infer the age of the ulceration from the size, color, consistence, thickness, and prominence of the crusts.

Relapses may occur by ulceration of the cicatrix, sometimes destroying the whole of it. This occurs most frequently in debilitated and poorly nourished persons, and in those who use alcohol to excess. The cicatrix following such a relapsing ulcer is very rough and unsightly. Sometimes the cure is retarded by repeated relapses at the margins of large ulcers, segments which had healed being again attacked by the ulcerating process, or again, parts more remote may be attacked.

The course of this syphilide is always slow, often occupying many years. In some cases it is accompanied by profound cachexia, while in others there is no disturbance of the general health.

This syphilide is of rather rare occurrence. It may appear as early as the third year, but generally later, even up to the fifteenth year after infection. It appears usually on the inner surface of the forearms and arms, on the breast, and on the legs. It causes little if any pain, but frequently gives great annoyance when near the joints. When the resulting cicatrices are small they are generally thin and parchment-like; but, if large, they are thick, uneven, and often traversed by fibrous bands, and covered by tubercles of false keloid. Often, however, even the large scars are thin, a fact of importance in making a diagnosis between the syphilide and serpiginous lupus. Blanching of the cicatrix extends from the centre towards the periphery. In large scars there may be a white central patch surrounded by a dull coppery-red areola, even long before healing is completed. In all cases the pigmentation fades slowly, and remains longest in the areola. Contraction of the scar near joints often results in permanent deformity.

The prognosis of this syphilide is never very good. Still a fatal

result is by no means inevitable, and proper treatment is in many cases quite effective.

The diagnosis from serpiginous lupus and serpiginous chaneroid is seldom difficult. Lupus usually begins in early life, and attacks the face. Its ulcerations are less definite and sharply cut than those of the syphilide. In lupus, red tubercles of ulceration, covered by crusts of light yellow or bluish-brown are mingled with the cicatrices, which are always uneven and fibrous. The history of the case may add to the certainty of diagnosis.

A serpiginous chaneroid usually has such a clear history that no mistake can occur. Its locality, its extensively undermined edges, its fungoid surface, and its erratic course are also sufficiently diagnostic.

In opposition to the view of some that this eruption is not syphilitic, it is only necessary to say that it always begins in a syphilitic lesion, that its ulcers and crusts have features similar to those of other syphilitic lesions, and, finally, that its cicatrices are typical of syphilis.

THE PIGMENTARY SYPHILIDE.

In 1853 Hardy described this lesion, which has since been the subject of monographs by Pilon, Tanturri, Fournier, Drysdale, Fox, and Atkinson, but its nature and origin are still questions of discussion.

It usually appears during the first year of syphilis, but may occur as late as the third year. It is composed of irregularly round or oval spots, with ill-defined or jagged margins, of a brown, *café-au-lait* color, which does not pale under pressure. The color of the patches may be so faint as to require a strong light and a certain position for their detection, and even then they might pass for spots of dirty skin. The patches vary in diameter from one-eighth of an inch to one inch, and are neither elevated nor scaly. They may be discrete or confluent, in some instances being sparsely scattered, and in others occupying a surface of the extent of one's hand, and presenting very different appearances under the two conditions. In the former the spots are small, and separated by wide intervals of unaltered skin. In but one instance of this kind I have found each spot surrounded by an areola of pigment of a deeper color.

When the spots are more numerous they present the peculiar appearance aptly compared by Fournier to a "network of lace with large meshes." The intervening skin seems even whiter than the normal skin, an appearance concerning which there is still difference of opinion, some believing that it is due to contrast with the adjoining brown patches, others that there really is a decrease or an absence of normal pigment.

According to the latter view, there is, therefore, at the same time a decrease of pigment in certain regions and an increase in others. The latter process we regard as the essential one, for some cases are seen in which whitened patches cannot be detected, and, in any case, they are much less in extent than the pigmented patches.