

The discoloration, the desquamation, and the moderate, often quite superficially extended infiltration may, however, give rise to mistakes, namely:

1. With a *chronic eczema* which likewise may last for years and presents circumscribed, dark-brown, desquamating spots.

DIFFERENTIAL DIAGNOSIS.

Eczema is firm, dense, offers great resistance to a blunt instrument.

Eczema weeps and deposits superficial crusts, but does not form ulcers connected with loss of substance, hence heals without the formation of cicatrices.

Eczema spreads as a uniform inflammatory infiltration into surrounding parts; lupus, however, always with the formation of isolated nodules scattered in the healthy tissue.

2. With *psoriasis*. Here, of course, only those rare cases enter into the consideration in which disseminated flat patches of lupus exfoliatus are more plentifully distributed, where the infiltration is so slight and extended so superficially as not to be perceptible to the palpating finger and to cause no difference in the level. The pale-red color of the psoriatic patches, the white lustre of the easily detached scales, under which the readily bleeding corium is at once exposed, the more extensive spread, the characteristic localization (especially on the extensor sides of the joints) will furnish adequate guiding points.

3. With *lupus erythematosus*. Here a mistake will hardly be possible; the pale-red, flat, almost imperceptibly infiltrated plaques of *L. erythematosus* covered with thin, superficial scales of fatty lustre give an altogether different picture from *lupus vulgaris*, in spite of the generally identical localization in the face.

4. With *rosacea* and *acne*. Here a mistake is more easily possible, owing to the enlargement of the nose occurring in them as in lupus. However, the differential diagnosis will be facilitated by the presence, in *acne* and *rosacea*, of a uniform firmness in the elephantiasis-like neoplastic connective tissue, the more intense redness, also by the pustulous character of the rapidly developing *acne* efflorescences, by the non-implication of the pituitary membrane, by the presence of the small telangiectasias perceptible through the skin, and finally by the frequently very profuse seborrhoea. It should be specially noted that the small, reddish efflorescences situated on the cheek in the neighborhood of the diseased portion of the nose, are, in lupus, yellowish-brown formations deposited *within* the tissue; in *acne*, bright-red, prominent nodules paling under pressure and sometimes suppurating.

In the case of *ulcerous* forms of lupus, the question may arise whether we are not perhaps dealing with a canceroid or with syphilis.

Respecting *epithelioma*, the case would be decided by the great (ivory-like) hardness of the elevated, translucent margins with whitish lustre and of the entire node nesting in the tissue; by the small quantity of secretion; by the development commencing at a more advanced age; by the involvement of the neighboring lymphatic glands; by the great painfulness. It must not be forgotten in this connection that a complication of carcinoma with lupus may occur. Such complicated cases are all the more dangerous because the proliferating cancerous mass finds but little resistance in the lupous tissue.

But still more frequently the question presents itself, *lupus or syphilis?* Even the tubercular, nodular syphilide may be mistaken for lupus, especially when the several nodes are crowded together. The difficulty of the diagnosis, however, is chiefly due to the similarity of the round, peripherally extending ulcerous processes present in both

diseases, as well as to their equal predilection for the nose, cheek, and face. The history, as a rule, is comparatively worthless, whether it points to syphilis or not. In the former case, because lupus coexisting with syphilis presents no striking features; in the latter, because ulcerous syphilis often develops so many years after infection that the credibility of anamnestic data, in case syphilis is denied, is very slight. The differential diagnosis between lupus and ulcerous syphilide is based on the following points:

1. *Form and appearance of the ulcers*. The margins of lupous infiltrations, though sharply demarcated, are low, soft, not infiltrated, blending rather gradually with the bottom of the ulcer. The bottom of the ulcer is lax, red, granulating, smooth, bleeding easily. Pain is slight.

The syphilitic ulcers are very painful. The margins are thick, firm; raised wall-like toward the healthy surroundings by the deposited infiltration, while they descend abruptly and sharply cut toward the bottom of the ulcer. The bottom is irregularly eroded, covered with pus and necrotic shreds of tissue. Hence the crusts upon syphilitic ulcers are much thicker and more prominent than those upon lupus ulcerations.

2. *Environs of the ulcers*. In lupus we find in the neighborhood a soft, friable granulation tissue which at once yields to every mechanical attempt at destruction, while the syphilitic infiltration is distinguished by a peculiar hardness. More peripherally, we find the nodular gummous infiltrations as opposed to the small, impalpable lupus nodules deposited within the tissues. These lupus nodules form the most valuable auxiliary in the diagnosis. They are present in the large majority of cases; otherwise these "primary efflorescences," unless the lupus is in the process of healing, appear in the periphery in the course of several weeks' observation.

3. *Origin*. Lupus as a rule exists from childhood, while syphilis usually is acquired later.

4. *Course*. Every single lupus node, as well as the whole morbid process, has a far more chronic course than syphilitic products. The development of the gummous forms of syphilis is indeed chronic; but whenever ulcerous processes are present, the destruction is rapid, eroding in the space of weeks what lupus would require months or years to break down. The danger of permanent losses of substance connected with ulcerous syphilis makes it our duty, in all doubtful cases, to begin with an antisyphilitic treatment. The latter has no injurious influence upon lupus; while on the other hand an untreated ulcerous syphilis might leave irreparable damage in its train. At any rate, the antisyphilitic treatment in itself furnishes a valuable diagnostic auxiliary. Emplastrum hydrargyri (especially if adhesive), conjoined with the use of potassium iodide, removes recent disintegrating syphilitic nodes in a very short time, while lupus nodes present no appreciable alterations under the plaster.

Particularly in the case of ulcers located on the female genitals the diagnosis of lupus is often very difficult. There is, on the one hand, the possibility of mistaking lupus for the ulcerous syphilide. Neither of these diseases possesses a pathognomonic sign. Both are equally rare on the vulva. Usually lupus occupies a greater surface and extends more deeply, its tendency to assume a circular form is less, and its course is more chronic than ulcerous syphilis. Sometimes we are aided by the scrofulous or syphilitic history, unless we are dealing with a patient who is both syphilitic and scrofulous. Often, as has been stated, nothing remains but to try an antisyphilitic treatment as a test.

On the other hand, lupous ulcers of the genitals may be mistaken for the serpiginous and phagedanic variety of soft chancre. The diagnosis from the objective symptoms will always be very difficult; it is facilitated, however, by the history. The serpiginous

ulcus molle develops in direct connection with the soft chancre. Without any preceding new-formation, the affection from the beginning represents an ulcer which besides, in the first stages, exhibits a far more acute, inflammatory character than lupus, even though lupus of the genitals, especially scrophulide lupiforme de la vulve, is distinguished from all other forms by its more rapid ulceration going hand in hand with destruction and perforation. Eventually, inoculation with the ulcerous secretion will decide; that is to say, it will be ineffectual with lupus, that from chancre will produce another ulcer. It must be borne in mind, however, that experimental inoculation with phagedænic chancroidal secretion may give rise to additional phagedænic chancroids, hence that the danger to the patient from the experiment, *per se*, is not inconsiderable. Finally, in the great majority of cases, besides lupus of the genitals, forms of lupus will also be found on other parts of the body which will be of use in the diagnosis.

Syphilitic ulcerations of the mucous membrane are liable to be mistaken for lupous ulcers which they resemble. But the ulcers of lupus are generally more shallow, shell-shaped losses of substance with soft margins and base, the latter bleeding easily on touch. Here too, the chronic course, the peripheral extension, and the termination of the infiltration in absorption or disintegration will decide when compared with the rapid progress in syphilis.

TREATMENT.—The treatment will have to aim at two objects: first, to stay the development and progress of the pathogenetic virus; second, to destroy the morbid products already deposited. "It is necessary to remove those portions of tissue which are so diseased that no firm, permanent tissue could be reproduced from them and which, if the patient were left to himself, would have to be destroyed by a slow process of ulceration if healing were to result; in those parts which are still firm and relatively sound, the lupous cellular infiltrations, sometimes diffused, sometimes in patches, must be caused to be absorbed" (Volkman). To accomplish the former object, we employ internal medication and the local destruction of the virus.

Internal treatment, of course, would then only attain its full value if we had at our disposal a specific capable of destroying the lupus virus. Second in order we would have to consider the medicaments which have a generally roborant influence on the constitution of the body, by which we would increase the power of resistance of the body toward the spreading virus.

As a sort of specific against tuberculosis, iodoform has in the most recent times acquired the greatest recognition. My own experiments had very encouraging results, although direct cure was not attained. Potassium iodide has long been in use against lupus; but at all events it requires to be used for a very long time if it is to have any effect, which appears altogether doubtful. Recognized of old as a specific agent is also cod-liver oil, with or without the addition of pure iodine, creasote, etc. (Ol. jecor. asell., 200 grams [Ol. morrhue, ʒ iij.]; with creasoti, 1 gram [gr. xv.] or iodi pur. 0.1 gram [gr. iss.]).

Arsenic in very small doses, iron, and quinine belong to the class of roborants. The general dietetic and hygienic treatment is based on well-known therapeutical principles.

The local removal of the virus, of course, will not be feasible without the destruction of the morbid products already present.

The number of the methods at our disposal for this purpose is very large. The value of each will be dependent upon:

1. The greater or lesser certainty with which the virus can be reached. Here we must not lose sight of the fact that the micro-organisms in question are always present

in the neighborhood of the obviously diseased portions in the midst of apparently healthy parts. The microscopic examination, therefore, is not reliable.

2. Certain æsthetic considerations with regard to the future appearance of the patient, since lupus attacks the face most frequently.

Starting from these points of view, we hold the best treatment to be that with caustics. They are to be preferred to surgical treatment with the knife (excision) or the spoon, or at least to be combined with these methods.

We discard caustic potash, Vienna paste, and Landolfi's paste, because their action is incalculably deep also on the healthy skin and leaves dense, hard, unsightly cicatrices. Better is Cosme's paste as modified by Hebra (composed of white arsenic, artificial cinabar, and fat), because it does not destroy the healthy skin. But after several days' application, inflammatory swelling and great pain result. Besides, there is danger of causing intoxication by the arsenic contained in the paste. Cauterization with the stick of silver nitrate has comparatively little effect. The healthy tissue offers sufficient resistance to the silver, and even in the diseased portions the caustic effect does not spread beyond the spots purposely touched.

The best seems to me to be pyrogallic acid. This acid destroys all lupus tissue and spares the healthy skin altogether. It penetrates into the tissue and is better able chemically to find the morbid patches in apparently normal structures than the eye of the observer. The probability of reaching the peripherally proliferating virus is therefore greater, even though this be not attained by the first application. Withal the cicatrices forming from the ulcers due to the employment of this caustic are very slightly, soft, smooth, because the healthy portions within the lupus patch, having been spared, are utilized in the cicatricial process.

The danger of intoxication is minimal, because the absorptive surfaces are too small to bring a sufficient quantity of pyrogallic acid at once into the organism.

Pyrogallic acid is best applied in the form of a ten-per-cent ointment spread upon linen. The linen rag, covered with gummed paper and tied as firmly as possible on the diseased surface, is changed morning and evening for three or four days. During this time it will be noticed that the softening masses of tissue become gradually browner and finally black (by the contact of the pyrogallic acid with alkaline tissues), until by the end of the third or fourth day a black discolored deposit lies upon the surface. Thereby our object has been reached: the diseased neoplastic foci are destroyed to a great extent, as far as the pyrogallic acid has been able to penetrate. The surrounding skin usually shows, aside from the blackish-brown discoloration, only an insignificant inflammatory swelling; only rarely will a vesicular detachment of the uppermost epidermal layers be observed. The pain, too, is slight; it begins as late as the third or fourth day, and continues only when the mortified ulcerous surface is left uncovered. The pulpy masses are then mechanically removed as much as feasible and an ointment dressing applied. We employ as an after-dressing a Lister's carbolic or thymol dressing, or rather one of iodoform ointment: an ample layer of powder is dusted on and covered with ten-per-cent iodoform ointment, or the anointed piece of linen alone is laid over it. Besides the (possibly present) specific antituberculous action of iodoform, its disinfectant and anæsthetic effects assert themselves. The cauterized portions become covered with skin in from one to three weeks. It is only rarely, of course, that a single three-days' application suffices to effect a cure; usually the course must be repeated; but in that case the cicatrix previously obtained is spared by the pyrogallic acid and merely the additional or formerly left lupous foci are softened.

Alcoholic or watery solutions of pyrogallic acid, as well as its employment in the form of ether spray, have not proved equally effective. The spray will be applicable only for lupus of the nasal cavity. Böck employs a pyrogallus plaster: Ol. olivar., Resin. coloph., āā 8 grams; Cera flavæ, 15 grams; Gummi resinæ ammoniaci, Balsami terebinth. venet., āā 1 gram; Acid. pyrogallic., 4 grams. M. ft. empl. The plaster acts more uniformly than the ointment and is somewhat less painful.

In a few cases, perhaps, the employment of pyrogallic acid could be combined with other procedures. For instance, scraping may have to be done previous to the application of pyrogallic acid; in the case of thick epidermal layers it will eventually be necessary to soften them by energetic washing with potash soap or by painting them with potash lye, and render them more permeable. For slightly ulcerating forms of lupus, chrysarobin may also be taken into consideration (1 : 4 ointment).

Starting from a similar point of view as Jarisch, Riehl recommended the direct application of iodoform for lupus. While formerly the treatment of lupus had been confined to the destruction and removal of the lupous infiltration, he believed that he had found in iodoform a remedy which was followed by gradual absorption and alteration of the lupous tissues.

My experiments in this direction yielded exceedingly satisfactory results. Ulcerating lupus nodes were covered with iodoform to a thickness of about one to three millimetres (simple painting with iodoformed glycerin or collodion produces no effect), whereupon the suppuration stopped at once and the infiltration disappeared.

For more deep-seated infiltrations the following preparatory treatment was employed: The diseased skin, previously freed from fat by washing with soap, was painted by means of a charpie brush with a solution of caustic potash (5 parts) in distilled water (10 parts) and left in contact with it until the epidermis over all the diseased parts was translucent, macerated, and detached; then by swabbing with charpie dipped in water the superfluous caustic potash was removed, and the part dried. The surface was then dusted with finely powdered iodoform to a thickness of one to two millimetres, and bandaged with wadding and strips of adhesive plaster. The dressing was allowed to remain for three to eight days.

In no case was there any suppuration; the iodoform had sunk into the depression formed by the disappearance of the lupus tissue; the intervening skin was pale and pliable; the swelling and erythema had largely disappeared. In very intense cases, the application had to be repeated two or three times.

The procedure, which causes pain only during the cauterization with potash, is convenient, inexpensive, rapid, and effective.

With regard to the purely mechanical methods of treatment, I wish to quote a few words of Volkmann's. He says: "It must be admitted that much more depends on *how* these various measures are employed than on which particular agent is chosen. The treatment of lupus is one of the numerous chapters of our art in which a great deal depends upon an accurately matured technique and method."

Among the mechanical methods, the most *radical* is excision. However, aside from the deep cicatrices left over, and the necessity of being obliged to operate in the healthy tissue, it offers no greater security as regards permanent cure than other methods. It can be recommended only when, owing to a plastic operation which is to follow immediately, the conditions are rendered more favorable by excision. Similar advantages,

though also serious disadvantages, are offered by the employment of Volkmann's sharp spoon. It is well known that healthy tissue does not yield to its pressure, while lupus tissue can be removed without difficulty, that is, so far as the at best coarse instrument can penetrate into the tissue. Hence we need not fear the removal of healthy tissues. After scraping away the lax granulations, an almost fibrous tissue is laid bare, which gradually cicatrizes. Pain and hemorrhage are comparatively slight. In this case, too, the after-treatment is advantageously inaugurated with iodoform; we have stated above that it is often advisable to follow the mechanical removal by the use of a caustic agent (pyrogallic acid). The spoon is specially applicable to the removal of lupus masses from the nasal cavities, to be followed by the employment of the iodoformed ether or pyrogallic acid spray.

For the removal of lupous infiltrations only, the following additional methods are in use.

1. Scarification, *i. e.*, multiple stabbing, linear scarification having been substituted for the punctiform scarification.

By the multiple incision of the capillaries, great anæmia of the patch is suddenly produced, while the neoplasm itself is mechanically destroyed with preservation of the cutaneous investment, and thus to a certain extent the progress of the lesion is interfered with. This method is applicable in all but the ulcerative forms of lupus. Volkmann recommends it wherever the parts are either diffusely affected with lupus or at least abnormally swollen and vascularized, as well as in the forms unattended at first with the formation of ulcers; also for the removal of the livid spots remaining on and around the scraped portions, and which tend largely to produce relapses. The procedure itself is very simple. With a sharply pointed two-edged knife or, better, with an instrument having a number of fine parallel blades resembling hair-pins, the patch is superficially incised by a straight cut. The depth of the incisions depends upon the facility with which the instrument penetrates the tissue. The pain in general is rather moderate, so that local anæsthesia is seldom called for. The bleeding can be controlled by simple compression with a sponge or by the application of agaric. Each scarification is followed by a light ointment or similar dressing. After a week the procedure may be repeated, the incision being made at right angles to the previous one. The frequency of scarifications depends mainly on the extent of the lupus; even if healing has been secured, very careful supervision will be necessary in order to either prevent or at once remove relapses.

Volkmann prefers scarification to all other methods. "Thus far," he writes, "no lupus has resisted this method, and in the majority of cases healing resulted exceedingly rapidly." Hence he does not hesitate to finish the treatment with a plastic operation immediately after the healing of the lupus ulcers. If necessary, he even transplants portions of skin affected with lupus, in order to attack the disease subsequently at its new location.

Next in effectiveness is the galvano-caustic method. One advantage is the avoidance of hemorrhage; another the comparatively slight painfulness, especially at white heat. A disadvantage is the fact that both healthy and diseased tissue equally suffer combustion.

The effect of mechanical destruction with a caustic action is combined in the solid stick of silver nitrate. It is pointed, and inserted into single nodules and larger infiltrations, and then bored into the healthy tissue in various directions. Here the normal structures offer sufficient resistance, so that only the morbid tissue is removed. The application of the stick, in itself rather painful, is usually followed by a harassing

inflammatory swelling which does not go down until after several hours. Hence the treatment can be repeated only at intervals of two or three days. The cicatrices are flat and soft, without any tumefaction. This procedure is specially appropriate for isolated nodules in the shape of relapses, or in the periphery of larger patches of lupus. It is also applicable for the first removal of lupus granulations on mucous membranes; later, it is better to substitute for it concentrated solutions (with equal parts of distilled water), which penetrate more deeply into the tissue.

The sticks of caustic for this purpose must be hard and firm, such as are produced by melting them with potassic nitrate (lunar caustic).

Besides, the scarification has been combined with the injection of destructive liquids. Auspitz dips the point he had attached to Volkmann's spoon into a glycerin solution of iodine (iodi pur., 1 part; glycerini, 20 parts), previous to every insertion of the scarificator, whereby he secures a more rapid healing and diminished painfulness. Schiff attached a small rubber pipette to a short injecting needle, so as to enable him to make an instantaneous injection with every thrust.

In order to hasten the absorption of the lupus proliferations, a good adhesive emplastrum hydrargyri is employed (or regular inunction with gray ointment), or painting with tincture of iodine or iodized glycerin (Iodi puri, Potassii iodidi, aa 5 grams; Glycerini, 10 grams). The diseased parts are painted morning and evening for several days in succession until crusts form, the evaporation of the iodine being prevented by the application of paraffin paper. Then the crusts are detached, and the procedure is repeated.

In ulcerous forms, besides the strong silver nitrate solution, it is recommended to use a solution of salicylic acid in glycerin (6:20), to be painted on three times daily. It is said also that the dusting of pure salicylic acid in powder causes the readily bleeding vegetations to wither and the ulcer to cicatrize rapidly.

But no matter what method be employed, we must invariably be prepared for a prolonged course of treatment, and it will always be necessary to carefully remove relapses and newly developed infiltrations. The patients require regular, unintermitting medical supervision for years. In some very advanced cases, it may perhaps be well to abstain from any interference. At present I have under observation a lady patient who has suffered for about twenty-two years from lupus of the right forearm and hand without having had any treatment. The entire forearm is one lupus surface; the palm of the hand is also interspersed with closely packed patches of lupus. When these patches are probed with the sound, the latter penetrates in all directions, without meeting any resistance, almost as far as the dorsal surface of the metacarpus. Therefore, it must appear questionable whether any therapeutic procedure, by excessive destruction, would not more seriously and earlier cripple the mobility of the still useful member than if the process be left to itself.

In many a case even amputation must be resorted to.

I here append a brief note on

THE SARTIAN DISEASE

(*Taschkent-Geschwür, Paschachurda, Jaman Dscharagan*)

which was published by Dr. Heiman in the *Gazeta lekarska*, No. 39, Warsaw, and reprinted in the *Deutsch. medic. Wochenschr.*, No. 3, 1883.

The Sartian disease, an endemic cutaneous affection of the inhabitants of Taschkent and its en-

virons, especially along the borders of the rivulet Tschirtschik, has been studied in its patho-anatomical relations by Prof. M. Rudniew.

According to the statement of the Sartians, the disease has existed in Taschkent for four hundred years, is hereditary, occurring also in persons domiciled elsewhere, but whose parents have had the disease in Taschkent; it owes its origin to drinking the water of the rivulet Tschirtschik, hence can originate only among the inhabitants of Taschkent, but is transmissible from them to other people; it never attacks the same person a second time.

The affection is most frequent in the face, especially on the forehead and the temples, more rarely on the lips, nose, lower jaw, auricle, most rarely on the eyelids; next in order of frequency, on the upper and lower extremities, the neck, and the trunk; never on hairy parts, nor on the palm of the hand and sole of the foot. It begins without any prodromata as a rose-red spot, the color of which soon changes into dark-red, yellow, or bluish; it is of round, oval, or irregular shape, sharply demarcated from the surrounding skin; it occurs either isolated or on several places at the same time. The size of the spots varies from that of a pin's head to that of a kopeck and larger.

At first the redness disappears under pressure, later it persists, the skin gradually becomes indurated, then acquires a smooth feel, later it grows rough, and, when the nodules approach one another, makes the impression of a wart. The nodules develop either simultaneously or periodically, in which latter case the more recent ones surround the older in a circle. With the occurrence of the nodules, desquamation of the epidermis begins and becomes more and more intense as the newly-formed epidermis is of more recent origin. As a rule, the nodules finally coalesce into a diffuse node of coppery or livid color. This hyperplastic stage may last from two to eighteen months.

Then the ulcerous stage commences, the several nodules breaking down from the centre toward the periphery, and finally represent a large ulcer with uneven bottom, and semifluid, sticky, grayish-yellow secretion, which gradually dries into yellowish-brown crusts. If crust-formation should not occur, the development of nodules extends peripherally, the bottom of the ulcer is then smooth, while the margins are uneven and sometimes undermined. Under inappropriate treatment the corium may disintegrate. Otherwise, or in spontaneous limitation of the process under the crusts, granulations form, which, according to the duration of the ulcerous disintegration of the several nodules, develop in the form of small islands. Finally the granulations become covered with epidermis, and there is formed a depressed, radiating or net-like, more rarely a smooth cicatrix. At times cicatrization takes place in the centre, while the process progresses at the periphery, which gives rise to considerable disfigurement. Only in children restitution *ad integrum* of the skin takes place; in a favorable case, discolorations remain behind.

The course is painless, and at most causes cutaneous itching. Young persons, up to the fiftieth year of life, are most frequently attacked. Relapses are exceedingly rare and never occur at the former seat.

According to Rudniew, the affection is a granuloma, the elements of which possess a considerable degree of permanence, and which develops in the substance of the corium. At first we notice a more copious vascularization in the papillary and reticular tissue. Then, along the dilated vessels small cells develop with very delicately-outlined nuclei and finely granular protoplasm, without any intercellular tissue; they rise up to the epidermis layer and effect its disintegration. The ulcerous destruction of the corium itself never extends as far as the subcutaneous connective tissue.

The Taschkent ulcer is distinguished from *lupus* by being spread diffusely over the skin, and never attacking the mucous membranes, by causing no reaction in contiguous parts, by having a shorter course and ending in spontaneous recovery, without impairing the general nutrition.

Tubercular *leprosy* differs from the Taschkent ulcer, aside from the painfulness of the nodes and the extension to bone and cartilage, by its duration and incurability.

Mistaking it for *syphilis* is prevented by the history and the slow course, especially the late occurrence of disintegration, finally the ineffectiveness of antisyphilitic treatment. The best results are obtained from cauterization with Canquoin's paste, caustic potassa, solid nitrate of silver, and chloride of zinc paste.

E. Polak, who had studied the affection as long ago as 1860 (*Wien. Med. Zeit.*, Nos. 48, 49), has recently again declared that the Taschkent ulcer is nothing but the so-called Haleb-node, bouton d'Alepp, or the Biskra and Delhi bubo.