

four hours (as recommended by Ricord), seems to exert a specific influence over gangrenous conditions.

It must not be forgotten that healing and apparent cure of the initial lesion does not mean *cure* of *syphilis*. After disappearance, more or less complete, the induration may return. Not unfrequently it may be observed to increase or diminish in apparent sympathy with the progress or abatement of the constitutional disease. From this fact the local induration has come to be considered by some as a reliable barometer, by which the effect of general treatment may be appreciated. The duration of the initial lesion varies greatly in different cases, sometimes disappearing within a few weeks, and with it every trace of induration; at others it continues as an induration, more or less distinctly marked, throughout the active stage of the constitutional infection. Enlargement and induration of the lymphatic glands, nearest in connection with the initial lesion, constitute the first positive evidence of the progress of constitutional infection.

Concealed initial lesions (as within the meatus urinarius or the anus) may be treated with bougies or suppositories medicated with opium, salicylic acid, or iodoform.

LESSON IX.

On the Early Manifestations of Syphilis—The Organism not Infected at once, but by a Gradual Process, through Normal Physiological Channels—No Constitutional Evidence of the Disease at any Point until at least Thirty or Forty Days after Inoculation—Roseola of Syphilis—Clinical Case—Roseola of Syphilis shown to be the Result of Sympathetic Nerve Disturbance like Simple Roseolas, and not Caused by the Local Accumulation of Syphilitic Material—Pigmentation Due to Exudation of the Coloring Matter of the Blood and not to a Specific Material—Clinical Case Illustrating the Papular Eruption of Syphilis and its Comcomitants—Supernumerary Epitrochlear Gland—Mucous Patches Simulating Diphtheria—The Secretions of all Lesions of this Stage of Syphilis Inoculable—Note in Regard to the Contagion of Syphilis—Importance of Care to Prevent the Same—The Necessity of an Artificial Port of Entry a Great Security against the Acquirement of the Disease—Illustrative Cases.

EARLY CONSTITUTIONAL FORMS OF SYPHILIS.

The cases to which your attention is now invited are in illustration of the acute stages of syphilis, and these include all the manifestations of the disease during which a contagious element pertains to it. The first manifestation, the "*initial lesion*" in its varied forms, has already been considered. The adjacent gland enlargements, resulting from the same processes of cell proliferation and localized accumulation, have been seen to be an inseparable adjunct in every case, but they have been present without the least evidence of constitutional disturbance. No sensation of the patient, nor any recognized physical sign, suggests anything more than a local disease. Notwithstanding the claim of certain authorities that syphilis is a constitutional disease at the moment of inoculation, and that, as Billroth puts it, the "*organism is infected at once*,"* all the scientific research yet made, goes to prove that the disease progresses by individual infection of germinal cells, from

* Billroth's Surgical Pathology. Am. ed., p. 386.

the point of inoculation, along the lymphatic channels, one of the chief offices of which, is to carry germinal material from the tissues into the general blood current. That their progress is slow and is obstructed by the lymphatic glands is made manifest, in every case, by the enlargement of all those immediately interposed between the point of inoculation and the great lymphatic reservoir, the *receptaculum chyli*, and by the fact that, until at least thirty or forty days after the inoculation, there is absolutely no evidence of the disease having reached the general blood current. In other words, it may be said, that, up to such time, the infection is confined to the locality of the inoculated point and the glands in immediate connection with it, and cannot yet be said to be a constitutional disease. At about the sixth week, however, an eruption presents, as the first evidence that the disease has found access to the system at large. This is well shown in the patient now before you. He has a history of suspicious venereal connections—of one in particular about two months since. He accidentally noticed a small abrasion on the inside of his prepuce, near the "bridle" on the left side, which bothered him for several weeks, but was never of sufficient account to consult a surgeon about, and finally healed. Yesterday, after getting quite heated in a running match, his face became spotted with red blotches, and, on going to bed, he found his body more or less covered with them. Here you have a fine specimen of the roseola of syphilis. Its history and advent are characteristic. There is a distinct thickening easily felt at the point referred to as the site of the abrasion. It is not as characteristic as in many cases you have seen, but is sufficient, when taken in connection with the history, the distinctly enlarged inguinal glands, and the roseola, to characterize the initial lesion of syphilis.

The glands of the cervical region are also enlarged, so that we may accept the case as a classical one of early constitutional syphilis, which I have been accustomed to designate, on account of the tendency to localized accumulation in the glands at a distance from the point of inoculation, and in the skin at a later period,

as the period of general infection and localized cell accumulation.*

In its general appearance this exanthem is not unlike a slight eruption of measles. Pressure with the finger in the syphilitic roseola causes the color to disappear completely when the eruption is recent, as in the present instance, but when it has existed for some weeks a brownish or copper-colored stain is left. The longer the eruption remains, the more likely it is to leave its characteristic trace, namely, a coppery stain, unaffected by pressure. The color of this stain here, as well as in other syphilitic eruptions, is usually considered valuable as a diagnostic mark of syphilis. With this exception, however, it is not materially different from an idiopathic roseola. Like the latter, it appears suddenly, often during or following any exercise which gives a violent impetus to the circulation of the blood, such as rowing, dancing, or running.

Pain or other premonitory symptom is not necessarily associated with it. Sometimes it is slight, consisting only of a few pale spots; while again it is profuse and highly colored, and occasionally slightly elevated. But it never develops into any other form of lesion. Beyond a reddish blotch, it is never more than a copper-colored stain; and even this stain, the only really salient point of difference between simple roseola and that which is thus seen to be associated with the advent of constitutional syphilis, will be shown to result from simple causes. It is true that this eruption is popularly accepted as syphilitic, in the sense that it is caused by the local presence of syphilitic material, and is to be gotten rid of through the same means by which the specific cell accumulations (forming papules in the skin and mucous membranes) at a later stage of the disease are eliminated. I believe, however, that this can be shown to be an error, and that this roseola, like all the other roseolas, is the result of a purely functional disturbance. Bäumlér says of it: "In every syphilitic

* For further information as to the causes of the "Roseola of Syphilis," see Otis on the Physiology, Pathology, and Treatment of Syphilis, p. 17. New York: Putnam. 1881.

efflorescence there is a circumscribed dilatation of blood-vessels, together with a certain amount of exudation of white-blood cells into the sheaths of the vessels merely, and into the surrounding tissue. The greater the degree of stasis the more abundant will the exudation of red corpuscles be; and *it is the alteration of the coloring matter in these red globules which imparts to the color of the syphilides, after they have remained for some time, their yellowish or brownish shades.* These shades are more distinct in proportion as the congestion of the vessels thereby occasioned recedes, and they are more pronounced the longer the stasis has continued. In the same way any *efflorescence* or its immediate vicinity, or scars following ulcers on the lower extremities, *not due to syphilis*, may assume this color. Long-continued dilatation of capillaries and stasis of the blood are all that is necessary to produce pigmentation."

Case II. Here is another case presenting the characteristic developments of syphilis at a somewhat later period, and affords us an excellent opportunity of a further study of its leading features. The initial lesion is said to have occurred four months ago, and one month after the suspicious connection. It healed in a couple of weeks. During its presence the patient says it looked like a simple sore, but there is still here a little knot of induration, situated in the loose tissue of the prepuce, indicating the character as well as the locality of the lesion. We find also well-marked enlargement of the lymphatic glands of the groins, and particularly below Poupart's ligament, on both sides, which latter is quite unusual at so early a period of the infection. You also observe very plainly an eruption on the forehead. It is papular in character, and is characteristic of the secondary eruption of syphilis, the first eruption being a roseola, which usually comes on at a period varying from six weeks to two months after the appearance of the initial lesion. Then, after another interval of about the same length of time, we get the second eruption, which is papular in character; the first—the roseola—being macular, and occasionally slightly elevated. The second eruption has been described by authors as

of a raw-ham color or a coppery hue. It is rosy in color when it first makes its appearance, but grows darker and darker, until finally the papule passes away, leaving a distinct reddish or copper-colored stain. You will observe in this patient that the eruption is very prominent and wide-spread over the back. Some of the papules are surrounded by a little exfoliated epidermis, which is known as the "collarette of Bielt," and is considered characteristic of a syphilitic lesion by some writers. It is simply an exfoliation of the epidermis of the surface of the papule, seen most distinctly at its base, and is dependent upon modified nutrition, caused by infiltration of the papules with cells. These interfere with the vascular supply of the part, and we get the exfoliation here exactly in the same way that we get it at the point of initial lesion—from accumulation and concentration of cells in that locality. When this exfoliation is present on a papule, it affords an additional proof of the syphilitic character of the trouble. You will, however, see cases of psoriasis where the scales have been brushed off, which so nearly simulate the syphilitic papular eruption that it is impossible to distinguish between them; and without other aid we are often obliged to wait further developments in order to make the diagnosis. Fortunately, however, for the diagnosis, but unfortunately for the patient, we nearly always have, at the time of the occurrence of this papular eruption, other lesions which aid us in making the diagnosis. The glandular enlargements in the groins, of the neck, and also in the epitrochlean spaces—sometimes one, sometimes all—ought to be well marked by this time. You will observe here on the neck a gland which can be seen at quite a distance—it is so much enlarged. There is a group of enlarged and indurated glands just behind the sterno-cleido-mastoid muscle, and another farther back on either side. Here in the right epitrochlean space there is an enlarged gland about the size of a large pea, and what I do not remember to have ever found before, viz., another gland about two inches higher up, only a trifle smaller than the first. Quite often the epitrochlean

gland, instead of being in the little space above the internal condyle of the humerus, is found an inch or two or three inches higher up, between the borders of the biceps and the triceps; but a supernumerary gland, as in the present instance, is very rare. By this time also papules occur in the mucous membrane, and these are especially characteristic, there being nothing else which resembles them, unless possibly in psoriasis. When syphilitic papules occur in mucous membrane they usually soon become eroded and covered with a diphtheritic pellicle to greater or less extent.

Mucous patches—really papules—in the mouth are characteristic of syphilis in its acute stage, and are present in a marked degree in this case. The mouth and the tongue are literally covered with them to an extent which you rarely see. These papules, which appear on the tongue, throat, and mouth, are superficial, and so flat that they are scarcely if at all raised above the surrounding surface or spread over an area varying from the size of a pea to that of half a dollar or larger, having often a gray or pearl colored diphtheritic edge which occasionally festoons the edge of the soft palate, forming a very characteristic and unmistakable mark of syphilis. Some time ago I was called to see a man who was supposed to be suffering from diphtheria. I found him surrounded by his family, who were in great solicitude about him. On looking into his throat I saw this characteristic festooning of the palate, and did not hesitate a moment in making up my mind that the trouble was syphilitic. Soon having an opportunity to speak to the young man alone, I discovered that he had syphilis, although he had not before been aware of it. The mucous patch is also liable to occur between the toes or any place where there is habitual moisture. Just at the verge of the anus is a favorite seat for it; and knowing this fact, examination of this locality will often help you out in the diagnosis of an obscure case. The mucous papule, from its prominence when on the skin or semi-mucous membrane about the anus, is usually called a mucous tubercle, and is quite characteristic in this patient, as you see.

You should bear in mind that the secretions of all lesions during this stage of the disease are inoculable, and one suffering from it may communicate the disease from the secretion of any open lesion upon the body or on the mucous membranes.* You will understand,

* The active period of syphilis, thus shown to be marked by excessive localized cell proliferation, is equally characterized by the contagious property attaching to cells thus generated. Inoculation of the blood, and of the secretion of all open lesions during the active period of syphilis, has been found capable of communicating syphilis promptly to healthy persons.

The physiological secretions—milk, saliva, urine, perspiration, tears, and spermatic fluid—*have not been proven to be agents of syphilitic infection.* Where apparently so, in many cases, syphilitic lesions of the mouth or breast have been found to account for the seeming inoculability of the saliva or of the milk. Repeated experiments* have been made by inoculation of the spermatic fluid of a person proven to be in the active stage of syphilis upon healthy persons, with absolutely negative results. In this we find confirmation of our position that the contagious property of syphilis is not an entity, an independent virus, pervading all the tissues and fluids of the organism, but that it is confined to the white-blood or tissue-building cells, and in this view we readily see how the physiological secretions above mentioned, which do not contain them, are found also to be free from the contagious property of syphilis.

Thus far the *only distinguishing feature* which has been recognized between normal embryonal cells and cells which make up the accumulations characteristic of the active stage of syphilis is the possession by the latter of the *contagious property*; in other words, a *contagium*—the power of setting up in other cells, through simple contact, the same disposition to rapid proliferation which the so-called syphilitic cells are known to possess. The direct result of this hasty proliferation, as far as we have yet been able to discover, *is not a destructive action.* It is simply and only what we should naturally expect from hastily generated normal material in excess of the necessities of growth and repair. In representative, uncomplicated cases it remains for a time obstructing the tissues by its presence, and then through purely normal processes, often of necessity set into operation by crowding of the newly formed cells, prolonged pressure, and consequent innutrition, and also from general causes it undergoes fatty degeneration, and is in this way finally eliminated from the affected organism.†

Bäumler virtually supports this view ‡ when he says of the active stage of syphilis, "If there are only a few local deposits, the elimination of the virus may be so much in excess of its production that the organism is gradually freed from it. *This takes place in the majority of cases, and at the expiration of eighteen months or two years the infection is entirely exhausted.*"

* Dr. Mireur, of Marseilles. *Annales de Dermatologie et de Syphilographie*, No. 6, tome viii., 1877.

† A fatty metamorphosis, entirely like that which occurs pathologically, occurs in the normal condition of the organism. Wagner, p. 305.

‡ P. 247 of Ziemssen's *Cyclopaedia*, Am. ed., vol. iii.

therefore, the importance of warning the patient having such lesion of the danger of communicating the disease to others by contact. A pencil, a pipe, a spoon, a knife, or other article introduced into the mouth where mucous patches are present, some of this secretion contained in the saliva drying upon it, and afterward coming in contact with an abrasion of the lips of another person, will communicate syphilis to that person as positively and certainly as would a syphilitic venereal connection. From this you may see that syphilis is not necessarily a venereal disease, but any one exposed in the ways above referred to is liable to receive it, in which event it will follow the same course as if acquired by venereal connection. The great security which we all have against the accidental acquirement of syphilis is, that it requires an artificial port of entrance—a fracture of the skin or of the mucous mem-

Mr. Hutchinson, of London, in speaking of the contagious property which attaches to the emasculated white-blood cell, which we call pus, says, "*All living pus is contagious.* . . . I mean," he further says, "that all pus cells possess the power of setting up, when transferred to another home, if that home be a suitable one, a kind of inflammatory action similar to that from whence they themselves had originated." This, we know, results in the almost immediate death of cells in localities so contaminated. In the case of the germinal cells contaminated by contact with the syphilitic cells, however, this results only in a hasty genesis of cells, a too rapid production, which prevents their highest development; they fall by the way, are heaped up, undergo fatty degeneration, and are or may be eliminated. Nor is it alone in diseased cells that a contagious property is claimed to reside. Rindfleisch, an eminent German authority, in speaking of embryonal cells coming up from the tissue juices for the regeneration of mucous membranes, says of such cells that "*they become epithelial cells only by coming into contact with such.*" We must believe, he continues, "in a kind of epithelial infection." This, he says also, "must of course just as well obtain when embryonal formative cells approach an existing epithelial stratum, as when, conversely, epithelial elements approach embryonal formative cells." If this be true, it at once becomes evident that the contagious property is not of necessity a *virus*; and it must I think be suggested, in this view of the matter, as equally evident that the so-called *virus* of syphilis is simply a manifestation of that property or personal influence inherent in all cells, whether healthy or degraded, and which is as subtle and intangible, as incapable of material demonstration, as the influence which one mind exerts over another. Is it not then possible that the mischief which syphilis does is rather the result of an interference with the normal processes, through hasty development brought about by this influence, than of the action of a specific virus?

brane for its inoculation. Otherwise, sooner or later, we should all be likely to have it, for we could not come in contact with people who have syphilis without danger of getting it at every turn. But fortunately it requires an abrasion, an open port of entry. It is rarely through the ordinary affectionate relations between children and parents, brother and sisters, that communication of the disease takes place. If, however, an abrasion exist upon the lips of both parties the disease may be communicated from the one to the other by a kiss. I have often known this to occur in the venereal kiss, but never by the ordinary kiss of courtesy and family affection. But the liability to communicate the poison to an innocent person should be borne in mind by every one passing through the acute stage of syphilis. We must also bear in mind the fact that the disease may be transferred from a syphilitic to an innocent person, by the physician, by the use of the spatula, carelessly laying it down after examining a syphilitic mouth, allowing the secretions to dry upon it, then introducing it into the mouth of another patient before properly cleansing it. This is especially liable to occur if the second patient be a child, as by its restlessness during the examination, a lesion of the mucous membrane of the mouth may be made by the instrument. All instruments in use about the mouth, throat, or teeth should be carefully cleansed and passed through the flame of an alcohol lamp immediately after use, and certainly before use upon another person, because syphilitic lesions may be present, although unrecognized. Several well-authenticated cases have come under my observation where syphilis has been contracted in the mouth from lack of proper care in this regard. Mucous papules are very often present in the vagina or on the os uteri of females suffering from acute syphilis. In the *Independent Practitioner* for March of this year may be found a report of no less than eight cases of syphilis of the finger, in medical men, acquired through vaginal examinations or attendance on syphilitic women during childbirth; and since sending in that report I have seen two similar cases occurring in the resident medical staff of one of

the hospitals of this city. All of these cases were followed by constitutional evidences of syphilis. It is scarcely necessary to say that the early recognition and local treatment of mucous papules, patches, or tubercles, is one of the important duties attaching to the management of acute syphilis. Another characteristic lesion of the disease consists in the presence of scabs in the hair, as seen in this patient. The discovery of scabs, in this locality, sometimes enables us to make a positive diagnosis, when otherwise we would be in doubt. Alopecia, or falling of the hair, is one of the common, though not constant, concomitants of this stage of the disease. It is readily accounted for on the same principle that explains the exfoliation of the epidermis in the syphilitic papules. The crowding of newly formed cells in the vicinity of the hair-bulbs interferes with their nutrition. It is not at all unusual for a patient to lose his hair completely, including his eyebrows and whiskers; but this baldness is not permanent, since on proper treatment, directed to the removal of this superfluous cell material, the hair is renewed. We find that any or all of the foregoing lesions of syphilis may be absent, and the patient yet go through a disease which shall be recognized as syphilis. In other words, this disease varies in its intensity as much as any other, and, except the enlargement of the lymphatic glands, none of the conditions which you see in this patient are necessarily essential to the progress of syphilis. This is a very marked case, one in which we find present more than the usual number of characteristic lesions or manifestations.

LESSON X.

The Treatment of Syphilis in the Acute Stage—Not Addressed to a Vague and Conventional Diathesis, but to the Removal of the Material shown to be Creating Disturbance—All Lesions of Active Syphilis the Result of Local Crowding of Cells at Various Affected Points—The Difficulty to be Remedied a Mechanical One—Inquiries as to the Best Method of Removing the Superfluous Cell Material—Fatty Metamorphosis Alone Capable of Effecting this—Different Methods of Producing Fatty Degeneration and Elimination—Mercury Proven to be the most Potent Agent—Reasons for Using it in Small Doses Long Continued—Directions in Regard to the Use of Mercury in its Various Forms—Internal Administration—External Use—Diet in Syphilis—Effects of Rum and Tobacco in Retarding the Cure of Syphilis—Prof. Willard Parker's Advice.

The treatment of this, as well as all cases of syphilis during the acute stage, will be addressed to the removal of the material which is causing the trouble. That is, to the superfluous cell growth or accumulation. The same material that we find in the initial lesion, and the same as that which we find embarrassing and enlarging the gland structure. The same as in the papule. The same as in the mucous patch. The same as in the papules which form the scabs which occur in the hair. These lesions are all brought about and kept up by one and a single condition, namely, that resulting from an abnormal local proliferation and accumulation of germinal cells. This fact has been substantiated by repeated microscopical examinations of all lesions of acute syphilis. Consequently, the cause of all the several conditions or lesions of active syphilis being the same,—that is to say, an accumulation of this embarrassing cell material,—the treatment is simple, and the same for all, having simply for its object the removal of such material.

The question as to how this shall best be effected leads us to consider first, the nature of the material we desire to be rid of. This has been proven beyond a question to consist of human germinal cells, in no known respect different from normal germinal cells, except that