and water being followed by Labarraque's solution in water, one part to four or eight, and the washings frequently repeated. Any of the last-named caustics are useful, especially if any of the patches have ulcerated. Otherwise, no treatment is better than dusting the surfaces, after washing and drying, with a powder of equal parts of calomel, oxide of zinc and iodoform (or using different proportions of these ingredients), and keeping contiguous surfaces apart by the interposition of dry lint. Even the vegetations, which spring up around and upon the surfaces of mucous patches, will usually subside under this treatment. If a mucous patch granulates too exuberantly, it should be burned with nitrate of silver or nitric acid.

This completes the study of secondary syphilis, with the exception of certain lesions, which are more conveniently considered under separate heads in connection with tertiary lesions of the same tissues or organs; as in affections of the eyes, ears, nails, joints, tendons, testicle (p. 432), nervous affections, certain forms of all of which may be found during the secondary period.

CHAPTER VII.

SYPHILIS OF SKIN AND MUCOUS MEMBRANES.

The Tertiary Syphilides.—Concomitant Symptoms on Mucous Membranes.

THE results of tertiary syphilis, as seen upon the tegumentary expansions, are most advantageously considered in connection with the lesions of the same structures encountered in secondary syphilis already discussed.

Tertiary is a far graver form of syphilis than secondary. Its presiding genius is destruction, the tendency of its lesions is to softening and ulceration, and the medium through which these changes are effected is a substance known as gummy material, either diffused through the tissues, or collected into circumscribed tumors. This gummy material is a specific neoplasm analogous to tubercle, cancer, lupous deposit, etc. It is an hyperplasia of cells, which have not generally the vitality to become organized. They grow at the expense of the tissue in which they are formed, and, after reaching a certain stage of development, undergo a retrograde metamorphosis, and either become absorbed gradually, without solution of continuity of the tissue in which they are deposited, or break down in mass, occasioning abscess or ulceration—in either case leaving indelible cicatrices behind. Certain of the new formations due to tertiary syphilis become organized, leading to permanent thickening, sub-periosteal exostoses, pachymeningitis, chronic laryngeal thickenings, etc.

Tertiary symptoms rarely appear during the first two years after chancre. After that period they may come on at any indefinite time, having been observed as late as fifty-five years. The appearance of tertiary phenomena (unlike the secondary) is rarely marked by the occurrence of any preparatory or accompanying febrile excitement. Cachexia is apt to accompany them, but even this is often lacking, and, except for the visible lesion upon the skin, the patient may consider himself in perfect health. Tertiary lesions of the skin and mucous membranes are rarely attended by any considerable heat, burning, itching, or pain—in fact, are usually devoid of any sensitiveness whatever. The course of tertiary affections is generally slow, occasionally terribly rapid. Sometimes they yield promptly to treatment, sometimes they are particularly rebellious, lasting for years. As a rule, however, skilfully-directed and long-continued treatment masters them, but it cannot restore lost parts, or remove the indelible injuries sometimes left by the ravages of the disease.

Tertiary syphilitic cachexia requires a word of description. It occurs at times independently of any visible or tangible lesion; or, again, may accompany any of the recognized forms of tertiary disease. It is probably always due to some physical change (amyloid, gummy) in the blood-making organs or the viscera, or to some nerve-change, rather than to any specific poisonous effect of syphilitic virus—since at this, the tertiary period of syphilis, the virus has lost its transmissibility, and seems to have worn out its intensity by lapse of time, while none the less the changes it has instituted upon the organism continue in full force. Syphilitic cachexia is attended by loss of appetite and strength, and by general anæmia. The sufferer becomes mentally depressed. He looks thin and pinched. The skin is tawny, dry, dirty-looking, without lustre. The hair thins, the epidermis exfoliates excessively, occasioning a more or less general furfuraceous desquamation. The heart and vessels of the neck exhibit the anæmic murmur, the pulse is small and rapid, and some anasarca is apt to be observed. Sleep is disturbed, and mental activity lessened. The patient may be nervous and fretful, or very despondent; occasionally he keeps cheerful.

This general condition indicates great depression of the vital force. It sometimes resists treatment effectually, so that none of the so-called specifics are of any avail. It calls for tonics, and change of life and air, and, if not relieved, becomes progressively worse, either carrying off the patient or favoring his death by some intercurrent malady. The existence of syphilitic cachexia with other syphilitic lesions always demands careful hygienic and tonic as well as (or perhaps rather than) specific treatment.

TERTIARY SYPHILIDES.

The tertiary lesions of the integument are:

1. Ecthyma.
2. Rupia.
3. Pustular syphilide in groups.
4. Tertiary ulceration.
5. Gummy subcutaneous tumor.

With these occur on the mucous membranes:

1. Mucous patches.
2. Scaly patches.
3. Deep chronic ulcers.
4. Destructive gummy ulcers.

1. Ecthyma.—In tertiary syphilitic ecthyma there is gummy infiltration of the true skin. After a few days a pustule appears on the top of the solid elevation. This grows rapidly and breaks, or is scratched off. The matter dries up into a dark-brown scab, perhaps containing a shade of green. Underneath this pus forms, increasing the thickness and roughness of the scab, while the solid portion of the lesion increases also in size, and becomes surrounded by a livid areola. The scab growing from beneath may finally become larger than the ulcer, but the livid areola and the interstitial thickening of the skin extend usually beyond it. Often the scab is depressed, let-in, as it were, inlaid into the skin, and firmly adherent to it. If removed, an ulcer, with sharp-cut edges and pultaceous floor, is found, very closely resembling a chancroid.

This form of deep ecthyma may occur separately or in groups; in the latter case giving rise to a scabbed patch of irregular form, under which there is ulceration, which may become circumscribed and heal under the crust, or, rarely, advance as a serpiginous ulcer.

The favorite seat of this eruption is the lower extremities. It may occur anywhere upon the body. The duration is often many months, by successive crops of ecthymatous pustules. An indelible, often deeply-depressed scar results, which remains of a livid color long after the fall of the scab, and is bronzed more or less in different subjects. Blanching commences centrally, until finally the cicatrix is of a pearly white, perhaps surrounded by a faint ring of pigment, which is slower in disappearing.

Mixed treatment is the most valuable.

2. Rupia.—The lesion in rupia is a bulla, quickly becoming pustular, the pus usually mixed with blood. It may be a flat pustule. It varies from the size of a pea up to (in bad cases) a penny. It rests usually upon a flat base surrounded by a red areola. The pustule breaks in a few days or dries into a crust, under which ulceration progresses. New supplies of pus are furnished from beneath, while the ulceration progresses slowly at its circumference. Thus the first crust becomes lifted up by the formation of a slightly broader layer of scab beneath, and, this process going on for weeks or months, finally a prominent, rough, oyster-shell-like scab results, marked by concentric layers, of a blackish-brown color often shaded with green. A new bullous ring may form outside the crust, and, in drying, rapidly increase the size of the latter.

These scabs may grow to over an inch in height and reach enormous lateral dimensions, especially if the ulcerations under several bullæ have become confluent. Pressing upon the crusts will usually cause pus to ooze out from the side. The scabs may remain on until cicatrization has occurred, and then, falling, leave a purple, depressed, slightly irregular spot, which behaves like the spot left by deep ecthyma, finally becoming white. On the other hand, the scabs sometimes become detached, leaving an indolent ulcer with sharp-cut borders of chancroid-like aspect, and tending to extend superficially but not in depth.

Rupia is found upon all portions of the body, scattered or in groups, and may coexist with other tertiary or late secondary lesions (patches of tubercles, scaly patches). It is believed to indicate a bad general condition.

Treatment is mixed, combined with a large share of tonics and hygiene.

3. Pustular Syphilide in Groups.—In this affection a red spot first appears. Upon this a group of small pustules develops. These become confluent and break, their secretion drying up into a thick, greenish crust. Outside of this the purple color forms an areola, as in the other varieties of syphilitic ulcer covered by a scab. The ulcer extends slowly and the scab keeps pace with it or falls off in part, showing a granular (perhaps fungous), unhealthy ulcer beneath, secreting a sanious, plastic pus, which readily reconcretes into scab. The scab so formed is broken up, granular, cracked, and not prominent as in rupia. New pustules at the circumference slowly tend to increase the size of the patch. After a time it becomes limited, the scab contracts and dries up, the areola becomes more bronzed; finally the scab falls, leaving the characteristic scar, which whitens very slowly, especially on the lower extremities. Instead of healing under the scab, the ulcer may become serpiginous, extending superficially but not in depth.

These patches occur singly or several at a time upon any part of the body, but preferably upon the face, scalp, neck, and breast.

Diagnosis.—The pustular syphilide in groups is liable to be confounded with the pustular scrofulide in groups, both having the same general character. The scab of the latter, however, is black or light colored, not greenish; the borders of the ulcer are irregular, fringed, undermined; in the syphilide, smooth, sharp-cut, abrupt, adherent. The chancroidal aspect of the base and the coppery areola are only marked in the syphilitic affection. The color of the scrofulide is paler. The cicatrix of the syphilide is smooth, depressed, thin, violet; at first bronzed, then white; of the scrofulide, irregular, prominent in parts, perhaps puckered, adherent; violet at first, then pinkish white.

Treatment is mixed, with iodide in excess.

4. Tertiary Ulcerations.—The syphilitic ulcer appears in two varieties:

(*a.*) Superficial ulceration, stationary or serpiginous.

(*b.*) Deep, destructive ulceration.

Probably all ulcers encountered in syphilis, even in the very superficial forms seen in secondary syphilis, are due to the softening of the so-called gummy exudation, since this exudation is nothing more than aborted connective tissue — connective tissue gone astray under the influence of the syphilitic poison. In fact, all the lesions of syphilis, external or internal (except the purely congestive), are dependent upon this cell hyperplasia; but the longer after chancre it occurs, the more prone it is to collect in considerable masses, to form rapidly, and to soften and disintegrate promptly, thus breaking down into ulceration and sweeping away any tissues in which it may happen to have been deposited. This considerable collection of new-formed, lowly-vitalized cell-hyperplasia, infiltrated through the structures of the true skin or involving the subcutaneous tissues as well, is always the precursor of syphilitic tertiary ulceration.

(*a.*) *Superficial Ulceration, stationary or serpiginous.*—This form of ulcer may commence as rupia, ecthyma, or a crop of pustules, the ulceration, naturally occurring under the scabs of these lesions, instead of healing slowly, either shedding the crust and remaining indolent and superficial, or progressing in a serpiginous manner. Often, however, the precursory lesion is the tubercle; a group of which, hard, shining, livid, indolent, varying in size from a small pea to a small nut, after remaining a while stationary, soften, inflame, and ulcerate.

This ulceration has the syphilitic characters—sharp-cut, prominent, hard, adherent borders, a smooth, indolent, false-membranous bottom. There is habitually no pain. An ulcer so instituted may remain long stationary, but usually gradually becomes serpiginous, i. e., creeps over the surface. The advance may be centrifugal in all directions, or along a narrow track in curves, inclosing healthy portions of skin; or, what is most common, advance may take place in one direction, while the opposite edge of the ulcer is cicatrizing. Unless kept off by dressings, such ulcers are constantly more or less entirely covered up by thick, uneven, greenish scabs.

The process of repair announces itself by a limitation of the ulcer, a flattening of its sharp borders; the base becomes red and granular, approaching the appearance of a healthy ulcer, and cicatrization goes on, the scar passing through the usual transformations of the syphilitic cicatrix. This scar may be somewhat uneven, owing to the different depths to which the ulcer has penetrated at different points. Several patches of superficial ulceration not infrequently coexist upon the same individual, usually in different stages, while cicatrices—some white, some bronzed some purple,—show that the disease is already of long standing.

Treatment is very effective, usually, in this form of ulcer, which is not necessarily attended by any marked cachexia. Untreated, successive outbreaks prolong it for years. Relapse is liable to follow a treatment too soon interrupted. The favorite seat of serpiginous syphilitic ulcers is around the joints, on the back, and on the face.

Diagnosis.—Occasionally the serpiginous ulcer is mistaken for old phagedenic chancroid. The distinction is made by a study of the history, the position of the lesion, and, above all, the effect of inoculation; finally, by treatment.[1]

Treatment is mixed, with the iodide of potassium in excess, or, if destruction of tissue is rapid, iodide of potassium alone, in rapidly-increasing doses until progress is stayed, and then by diminishing the dose and adding mercury gradually, as in the mixed treatment. Locally, after poulticing, iodoform and mercurial preparations yield beneficial results.

(*b.*) *Deep, Destructive Ulcer.*—This is a gummy infiltration of the skin appearing in the tubercular form. It occurs by preference upon the nose, the ear, the lip, and the head of the penis. The tubercle is often quite small, and ulcerates so quickly that the ulcers seem the primary lesion; in other cases the tubercles remain some time before softening. A thick, black, rough, greenish crust forms over the ulcer, which continues its ravages beneath, progressing inward, destroying every thing in its track, including cartilage and bone. If the crust be removed, an uneven ulcer is revealed, resembling the deeply destructive, phagedenic chancroid in all its features. Exposure to the air causes the crust to reform. During the whole course of this affection there may be no constitutional disturbance whatever, no cachexia, and locally no appreciable amount of pain or discomfort. This form of ulcer may last for years, with periods of repose and paroxysms of progress. It is not usually so amenable to treatment as the serpiginous ulcer. The whole nose, ear, lip, or large portions of the penis, may be eaten away by it. Its cicatrix behaves like other syphilitic scars, except that it is uneven, from the different depths to which ulceration has progressed, and may be bridged or bridled.

Diagnosis. — The diagnosis is with lupus exedens, true cancer, chancroid; the former for the nose, lip, or ear; the two latter for the rest of the body, especially the penis. Lupus occurs usually in the young, gummy ulceration in the old; lupus has a less livid border, a pure black or light-brown scab. The history throws much light on the subject, and above all things concomitant lesions, exostoses, optic neuritis with mydriasis, gummy ulceration of the palate or pharynx. Finally, the effect of treatment is to be invoked. This form of disease, occurring with inherited syphilis, is almost invariably mistaken for lupus exedens, and treated as such.

[1] This question of the diagnosis of these two forms of ulcer is continually arising in practice. The points have been critically studied on page 486.

Epithelioma commences as a tubercle or a wart, which remains a long time before beginning to ulcerate; the borders of the ulcer are everted, knobbed, irregular; the floor is more uneven, the fetor greater, and the neighboring glands become involved, which very rarely occurs for the other ulcers under consideration.

Especially on the glans penis is tertiary, destructive ulceration liable to be mistaken for phagedenic chancroid, and ineffectively treated. There is absolutely no feature among the physical characters of the two ulcers which distinguishes them. Chancroid commences by a pustule, syphilitic ulceration does not; but this can rarely be verified. There is perhaps something distinguishing in the appearance of the ulcers, which appeals to the practised eye, but it cannot be described in writing. Inoculation is an infallible test, the history of the case is of vast importance, the effect of treatment often absolutely diagnostic (*see* Case XLVIII.). Cauterization is rarely more than temporarily beneficial.

Treatment is that of late syphilis. Local applications are not very serviceable.

5. Gummy Tumor of the Subcutaneous Tissue.—Gummy tumor may develop wherever connective tissue is found, consequently it abounds in and under the skin. In the thickness of the latter it forms a tubercle, under the skin a tumor. In rare instances, gummy deposit in the subcutaneous tissue occurs as an infiltration instead of in its usual circumscribed form. The skin becomes raised, thickened, reddened; there are little prominences upon it which ulcerate, and then comport themselves like the syphilitic ulcer. Lancereaux[1] has well described this infiltration, and refers to Vidal de Cassis.

Gummy tumors appear first as little hard subcutaneous lumps, freely movable over the subjacent tissues, the integument slightly movable over them. They are not sensitive to pressure. As the tumors slowly increase in size (they sometimes remain stationary for months), the skin over them becomes involved, and the tumors attached to the underlying tissues so that they cease to be movable. Now a purplish discoloration of the skin commences; the tumor, previously hard and painless becomes somewhat sensitive, and softens centrally, the skin breaks down, and a thick, puriform material, not pus, often mixed with blood, is discharged. After discharging, the lesion remains as a characteristic, deep, indolent, syphilitic ulcer, whose edges at first are undermined, remaining stationary or progressing, and in some cases strongly resembling cancerous ulcers, or, finally, tending to scab over and healing with the characteristic scar.

Gummy tumor often forms under the periosteum of superficial bones (clavicle, skull, tibia, ulna), grows quickly, and may ulcerate, and behave like the corresponding lesion, subcutaneously situated, the differences being: that it is deeply attached from the first; that bone may be felt

[1] *Op. cit.*

through the ulcer, and that a superficial scale of bone may become necrosed, thus complicating and prolonging the case (carious ulcer). Subcutaneous or sub-periosteal gummy tumor, instead of coming quickly to the surface, may diffuse itself laterally after softening, and occasionally burrow a short distance before opening.

Subcutaneous gummy tumor may be single or multiple. The most frequent seat is on the buttocks, neck, head, and extremities. They rarely reach a size larger than a nut, but may become as large as, or larger than, an egg, after softening. Their structure, here as elsewhere, is small rounded cells, more or less gelatinous; granular, intercellular tissue, with a few fibres, fusiform cells, and small vessels. The constant tendency everywhere is to undergo retrograde metamorphosis, either liquefying and ulcerating out, or becoming cheesy and going through absorption with or without cretification.

Treatment is that of late syphilis, by the iodide of potassium.

AFFECTIONS OF MUCOUS MEMBRANES ENCOUNTERED WITH TERTIARY SYPHILIDES.

These are four:

1. Mucous patches.
2. Scaly patches.
3. Deep chronic ulceration.
4. Destructive gummy ulceration.

The first three of these conditions have been already described (p. 585). It is only necessary to add further that mucous patches become less frequent, and scaly patches (sometimes called "milk-spots") more common as the distance in time from chancre is increased. The chronic ulcers of the fauces or mucous membrane of the cheeks at or near the angle of the lips, surrounded by more or less brawny infiltration of the neighboring tissues (already described), are found in tertiary as well as in late secondary syphilis. They are similar to some of the serpiginous or stationary chronic cutaneous ulcers, and undoubtedly often depend upon a moderate amount of gummy infiltration of the tissues. A favorite seat for these late gummy ulcers is the posterior wall of the pharynx, high up, often extending into the posterior nares, and encroaching on the upper surface of the soft palate, which is not necessarily involved. To see them it is often necessary to lift up the soft palate with a suitable curved probe, while the mouth is widely opened, or even to use an inverted laryngoscopic mirror. These ulcers have raised borders, are covered by a tough, whitish secretion, are often raw-looking in parts. They are encountered also on the mucous membrane of the nose, causing a slight catarrhal flow, and accompanied by the occasional discharge of bloody scabs from the nose, or "hawked up" in the morning while clearing the throat. When the ulcers are extensive (serpiginous), they indicate long-standing, inveterate disease. Their presence may occasion pain in swallowing, and perhaps in breathing.

Treatment.—Any of the local means detailed at page 588 may be resorted to with advantage, except the caustic preparations last mentioned, which should not be applied over a large surface. Great cleanliness, constant gargling with chlorate of potash, tannin and glycerine used with a brush, and sulphurous acid in spray, leave little to be desired in the way of local applications. The mixed internal treatment, with a preponderance of the iodide of potassium, is slowly but surely curative. Local measures are of secondary importance. Where the nose is involved, it is difficult to maintain cleanliness without the use of the nasal douche. In applying the douche it is essentially necessary to send the stream up through the nostril which is most obstructed, so that the fluid may readily return through the more open nostril. If this precaution be neglected, and the fluid flows up more readily than it can escape, there is danger of some of it being forced into the Eustachian tube, and lighting up inflammation of the middle ear. The posterior nasal syringe and retro-pharyngeal syringe complement the douche. By these two means the cavity of the nose may be thoroughly cleansed with warm water, and subsequently medicated with mild solutions of borax, chlorate of potash, permanganate of potash (gr. j–℥ iv), or a strong solution of common salt.

4. Destructive Gummy Ulceration.—This form of ulcer is one of the most serious encountered in syphilis. It may develop as a gummy nodule or as diffuse infiltration of the sub-mucous tissue, or be primarily sub-periosteal on the wall of the pharynx, or in the nasal cavity, or on the hard palate. It develops first as one or more deep, round, hard, insensitive swellings, possibly a diffuse infiltration. The mucous membrane may be unchanged in color at first or slightly yellowish, if the tumors are superficial. As the latter grow, the membrane over them darkens in color, becomes œdematous, then softens and rapidly gives way, leaving a deep, irregular yellow ulcer, with distinct loss of substance, surrounded by a line of inflammatory redness. Such ulcers often spread with alarming rapidity, perforating the soft palate or cutting off the uvula within a few days, even hours. The explosion may take place as if by electricity, and twenty-four hours deprive a patient of his soft palate. Deglutition is sometimes painful, sometimes painless, according to whether or not the ulcer is put upon the stretch in swallowing. Any subjacent bone becomes rapidly eroded and necrosed, so that the progress of the ulcer may destroy all the soft and portions of the hard palate, more or less of the turbinated and ethmoid bones, with the vomer and portions of the posterior bony wall of the pharynx, leaving a vast ulcerated cavity to represent what was the fauces and pharynx. The disease may extend inward occasionally and affect the membranes at the base of the brain, giving rise to epilepsy or other nervous phenomena. The voice becomes nasal, food and drink pass forward and out of the nose in swallowing, and yet with all this the patient may be cheerful and suffer little, often absolutely no pain.

The secretion of these ulcers is very foul and has a peculiar odor, in itself suggestive if not pathognomonic. Portions of bone die and are discharged from time to time, or may become encased in new bone during the process of repair. The dead bone, thus remaining encased, acts as a local irritant, and keeps up ulceration and suppuration perhaps long after treatment has removed all progressive disease.

When taken early these ulcerations yield readily to energetic treatment, later they may prove very rebellious. But Nature accomplishes wonders when repair does take place. Cicatrization binds down any portions of the soft palate which may have escaped destruction, and leaves a characteristic seamed and distorted condition of the pharynx, perhaps entailing a permanent alteration in the voice, sometimes rendering the deglutition of fluids difficult, and perhaps only leaving a small opening to mark the site of the uvula. Such a condition of throat is always the result of syphilis, never of scrofula, or so rarely that practically the word "never" is allowable. It has been written that scrofula may cause these throat-ravages in children, because children are found on whom a syphilitic history or parentage cannot be traced, who have ulcers and other evidences of so-called scrofula and destructive ulceration of the soft palate, perhaps not so promptly relievable by the iodide of potassium as similar fresh conditions in the adult. Yet the iodide of potassium is usually given for these cases and with benefit.

The following is a good illustrative case:

Case LI.—A girl, aged sixteen, had, in childhood, ulceration of the throat, which had cicatrized, leaving the soft palate bound to the pharynx and a permanent cicatricial slit in place of a uvula. She was an orphan, never had had an eruption that she remembered, had perfect incisor teeth, had had no interstitial or other keratitis. A chronic destructive disease involved the end of her nose, including both nostrils and part of the upper lip. She had been treated for a long time as a case of lupus, and had derived no benefit therefrom. The destructive ulcer at the end of the nose (although the scab was distinctly of a greenish black, very thick, rough, and adherent), had been burned twice with the red-hot iron without benefit. A few weeks of large doses of iodide of potassium brought about cicatrization.

Treatment.—It is rare in the practice of medicine that the surgeon has an opportunity to do good so certainly and so promptly as in commencing destructive gummy ulceration of the fauces. It is useless and unnecessary to trifle with local measures: only one thing is necessary, and that is the iodide of potassium in sufficiently large doses. It should be commenced not at five but at gr. x–xv doses, and run up from there, watching the stomach, until the local lesion yields and the ulcer puts on a bright color. The stomach must be respected, by substituting the iodide of sodium, if necessary, for the more irritating salt, possibly giving it by the rectum. Where the lesion is already old and extensive destructions exist which are still progressing, the same

treatment is applicable, carried high enough to control advance of the ulceration, but not pushed so rapidly. There is no limit to the dose except the production of its effect. A patient at the Charity Hospital, with old disease which had destroyed both hard and soft palate, with most of the bones of the nose, had to be carried up to ʒ ij daily before the desired effect was reached. In all old cases not rapidly advancing, especially where the nasal cavity is involved, advantage is derived from the local treatment, as suggested, at page 588. When the ulceration has been arrested and cicatrization is nearly perfect, discharge, odor, scabs from the nose, are sometimes kept up by a piece of necrosed bone, surrounded by a partial involucrum. No amount of continuation of treatment is of service in such a case. The dead bone can usually be felt with a probe. An operation for its removal, if feasible, will be followed by a cessation of the symptoms.

The numerous other manifestations of tertiary syphilis will be considered in connection with the secondary forms of disease under sections devoted to the different organs and tissues of the body, as the eye, testicle (p. 432), larynx.

CHAPTER VIII.

SYPHILIS OF THE EYE.[1]

The Eyelids.—Chancre, Mucous Patches, Gummy Tumors, Ptosis.—The Conjunctiva.—The Cornea.—The Iris.—Mydriasis, Iritis, Varieties and Complications, acquired and hereditary.—Prognosis.—Treatment.—Vitreous Humor, Hyalitis.—Crystalline Lens, Cataract.—Cyclitis.—Choroiditis, exudative and atrophic.—Retinitis.—Neuritis Optica.—Paralysis of Muscles.—Periostitis.

All the tissues of the eye and its surrounding parts may be affected by syphilis. The influence is either direct or indirect, and the disorders thus induced are usually grave, are sometimes tedious, and are prone to do damage to vision. They can rarely with safety be left to take their own course, and in a satisfactory degree they yield to suitable and early treatment.

The imprint of syphilis on the eye may be made during any period of its career. Even chancre has been found upon the superficial parts, while, during the secondary and later stages, a variety of lesions may appear. Hereditary syphilitic taint finds expression in disease of the eye as a frequent occurrence.

To give due attention to the various lesions which may occur, I adopt the anatomical order from without inward, both for simplicity and completeness.

[1] Chapter VIII. is written by Prof. Henry D. Noyes, M. D., at the request of the authors, who fully indorse the opinions therein expressed. It appears in the first person, as conveying the personal experience and convictions of the writer.

The parts which we begin upon will be the Eyelids.

Here *primary chancre* has been noticed both in adults and in children. The sore presents the same appearance as when situated on the genitals, and does not require any special remark as to treatment. If the sore be on the cutaneous surface, it does not greatly endanger the eye; but, if on the mucous surface, or, as has been seen, on the caruncle, it becomes a serious thing. The accident is, however, so rare that it does not seem worth while to enlarge on the subject.

Mucous patches occur both on the cutaneous and conjunctival surfaces of the lids. I have seen them as large as a three-cent piece, but have not seen any more serious result come from them than a slight catarrhal conjunctivitis. Weak astringent washes, as of alum or sulphate of zinc, or touching them with a solution of nitrate of silver, gr. v vel x aquæ ad ʒ j, is all the needful local treatment.

Various forms of secondary *cutaneous eruptions* may appear on the skin of the eyelids, as upon other parts of the surface, and the eyelashes and brows are liable to be lost when the hair of the scalp is being shed, but these are incidents which only call for passing mention.

Somewhat more important is the fact that *gummata* develop in the eyelids and adjacent parts. They may grow to be as large as a hazelnut. In one instance, under my notice, such a tumor appeared in the skin over the lachrymal sac, and, months after the first tumor had disappeared, another occurred upon the border of the lower lid. These developments belong to the late stages of syphilis, the tertiary period; in the instance above alluded to, several years had elapsed since the first infection.

A mistake is not unlikely to be made in diagnosis of these cases, because cystic tumors, and less frequently fibrous tumors, are of common occurrence in the lids. They, like gummata, usually grow slowly and painlessly. But it is not always true that gummata grow slowly; they may attain considerable size in two weeks.

The skin is sometimes thickened, and raised above the surrounding level. The most important local guide in diagnosis is that the swelling involves all the tissues where it is located, and, as it were, incorporates them all into itself. This, in connection with its indolent, painless character, the possible discoloration of the skin, and the constitutional symptoms and history, will guard one against the error of attempting to apply the knife or other instruments to the removal of these tumors. Like other gummata, they melt away under a suitable course of constitutional treatment.

Drooping of the upper lid (ptosis) is caused by affection of the third nerve, and will be alluded to when speaking of paralysis of the motor nerves of the eyeball.

Conjunctiva.—The kinds of inflammation which syphilis may cause in this membrane (meaning the ocular conjunctiva) are: First, sores