Unfortunate, finally, are the effects which result from surgical operations on scrofulous bones. The same diseases of the bones, for which the operation was undertaken, usually spring up anew on the wounds of the bones, and the process is but little retarded, in spite of all the torture and pains.

(3.) Hereditary Syphilis.—Syphilitic parents beget children, who are either born with the signs of the malady, or, at least, present them in the first few months of life. Prognostically, it is of importance to distinguish whether the children bring with them the developed syphilis into the world, or only become affected with it some time thereafter.

Children, in whom syphilis has broken out *in utero*, are mostly delivered prematurely and dead, and surely perish soon after delivery if they came into the world with pemphigus vesicles. But the progeny of syphilitic parents, born apparently healthy, who only manifest signs of inherited syphilis after many weeks or months, very frequently recover under an appropriate treatment, and may develop perfectly, without any further cachectic troubles.

Before we enter more minutely into the etiological question, it may prove advantageous to first analyze the morbid alterations belonging to syphilis.

Symptoms.—Inherited syphilis manifests itself: (1), upon the skin; (2), upon the mucous membranes; (3), in the subcutaneous cellular tissue; (4), in the muscles and bones; and (5), in the internal glandular organs.

(ad 1.) *Skin.*—Syphilitic eruptions of the skin (the syphilides) are divided into (1), *maculous* and *squamous;* (2), *papulous;* and (3), *pustulous* and *bullous.*

To the *first form*

Roseola syphilitica belongs. By this we understand small spots, of the size of lentils up to that of split peas, of a coppery color. They appear simultaneously upon large tracts of the surface of the body as bright-yellow or yellowish-red spots, primarily without any alteration of the epidermis of the affected parts, and without any induration or elevation over the parts of the integument that are still sound. In time, however, they become slightly elevated, the color turns to coppery, and they appear as if ground off, or, in other cases, become covered with fine white scales. If the patient is subjected to an antisyphilitic treatment, they will disappear entirely, but, if nothing is done, they will become more and more infiltrated, the epidermis either corrugated or dry, the crusts begin to exhale serum, and the spots covered with yellow scabs.

On parts of the integument that are constantly soiled with the alvine discharges, as on the nates, and the posterior surfaces of the thighs and extremities, excoriations often form, and finally, also, deep ecthyma-like ulcers.

Even the unaffected portions of the skin never preserve the normal color and smoothness. They exchange their rose-red color for a smoky-grayish one; this is strikingly seen on the face, and still more so on the forehead. The integument in many places becomes wrinkled, in consequence of the emaciation which invariably ensues in syphilis. The palms of the hands and soles of the feet seldom remain intact; a serious desquamation soon takes place upon them, and, in children who often handle the dirty sugar-teat, deep ulcers form on the palms of the hands. This preference of the syphilides for the last-mentioned parts of the integument is of great importance in the diagnosis, for the other non-syphilitic eruptions spare these very parts.

The *second form, papulous*, scarcely ever exists by itself, but is complicated either with the first or third form, bullous. Syphilitic papules (lichen or strophulus syphilitica) are of a brownish color and hard, without any red areola, in most instances dispersed, and are likewise oftenest found on the palms of the hands and soles of the feet. They are not characteristic enough to allow the diagnosis of syphilis to be based upon them alone without any additional symptoms. If no treatment is instituted, they will remain unaltered for a long time, grow more and more numerous, are destroyed in many places by scratching, and then represented by larger or smaller irregular ulcers. But, if a proper treatment is carried out, they will completely disappear in a short time; this is explained by the slight morbid derangement they had produced.

The *third form, bullous*, and *pustular*, is the most malignant, and occurs only in the very aggravated stages of the cachexia. It is represented by

Pemphigus Syphilitica.—By this we understand yellow, yellowish-green, or brownish purulent blebs, of the size of a hempseed up to that of a bean, surrounded only by a narrow areola. Their contents are turbid, purulent, of an alkaline reaction. They occur mostly in an isolated form, coalesce only on very few places, and these are also most surely found upon the palms of the hands and soles of the feet. These pustules either collapse after several days, and dry up into thin crusts, or they burst, their contents escape, and an intensely-reddened cutis becomes visible after the epidermis has exfoliated. Afterward the sore discharges but very little, so that hardly any crusts form, and the garments are but little soiled. It is not possible for deep ulcerations to form, for the simple reason that the subjects

do not live long enough for that purpose, but collapse rapidly, and perish, without any additional sickness, under weakness and exhaustion.

The prognosis, in this bullous exanthema, may be put down as fatal with the utmost certainty. Children who bring the developed pustules with them into the world die in the first few days after delivery; but, when they acquire them a little later, between the third and eighth day of life, they may live for a few weeks, but ultimately die almost unexceptionally. That form of congenital syphilis, which, according to *Zeissl's* extensive experience, almost entirely manifests itself in the form of pemphigus, is invariably fatal.

It is a remarkable fact that syphilis, in the great majority of these cases, descends from the father, and that the most careful examination of the mother leads to no positive results, so that the connection between these exanthemata and syphilis has often been doubted. The doubts have mainly arisen in lying-in-houses, where the affected fathers very naturally could seldom be seen, while, in private practice, the previous and present state of health of the father can readily be ascertained. In the latter case it becomes apparent that the father invariably suffers, or at least had suffered, from secondary syphilis. It has often been observed that, after the father had subjected himself to a thorough antisyphilitic treatment, the children then generated come into the world normal, without any sign of syphilis whatever, and subsequently also remained well.

Besides these pathognomonic pemphigus pustules, there is yet a pustular eruption which occurs at a later period in syphilitic children, but these pustules are situated upon a red, hard base, and, after they burst, leave behind deep lardaceous ulcers (ecthyma pustules).

The cutaneous ulcers and rhagades, which only break out after birth, are the most characteristic lesions of syphilis; they occur by special preference at the angles of the mouth, on the margins of the lips, and around the anus and genitals. The ulcers on the lips are flat, have a yellow, but slightly-indurated base, and are strictly confined at first to the red margin which hems the lip. Not till after some time do they grow beyond their original limits, and involve the adjacent integument, particularly the lower lip, where the epidermis is softened, by the food and sugar-teat.

By *rhagades*, cracks, fissures of the lips in the direction of the natural cutaneous folds, are understood. They sometimes originate in perfectly-healthy lips, generally, however, the ulcers just described are present, from the crusts of which the lips become brittle, and, when they are much stretched, as they necessarily must be every time the

child cries, it causes them to crack and break. The little fissure is next infected by the pus from the ulcers, and tolerably deep, yellow erosions result, which bleed freely every time the lip is stretched, and for the same reason also heal extremely slowly.

The fissures are also met with at the nares, though less frequently than about the mouth, as also about the anus and vulva in girls, and occasionally also at the angles of the eye. Those of the lips have an additional particular importance, namely, by them a syphilitic nursling may most surely and directly infect a healthy wet-nurse.

Finally, as regards the cutaneous secretion, badly-smelling perspirations over the entire body, especially on the head, occasionally occur in syphilitic children. They also disappear as soon as the cachexia is eradicated from the system.

(ad 2.) *Mucous Membranes.*—Swelling of the *nasal mucous* membrane is the first manifestation of hereditary syphilis, and does not appear for some weeks after the delivery. Children thus affected breathe through the open mouth, and snore while nursing. No morbid alterations are to be observed on the external surfaces of the nose, but the mucous membrane appears reddened and tumefied. A purulent discharge, coryza syphilitica, sets in after this swelling has existed for several days, the pus at first is muculent, and subsequently becomes sanguinolent, ichorous, eroding the upper lip over which it flows down. The spreading serpiginous ulcers which soon form may finally attack the bone, and cause necrosis and exfoliation of the vomer, the turbinated, and the ethmoid bones. When the subjects surmount such an intense syphilis, the nose at least will be destroyed, and the face disfigured for life.

The same flat, shallow ulcers originate upon the *mucous membrane* of the mouth, and *upon the tongue*, as on the margins of the lips; they never penetrate deeply, and readily cicatrize, if a proper treatment has been instituted.

The fissures and ulcers about the anus, on the vulva and prepuce, have already been spoken of. Leucorrhœa and ulceration of the vagina occur tolerably often. Otorrhœa and ophthalmoblennorrhœa in syphilitic children differ only by their great intensity from the non-syphilitic. In this ophthalmoblennorrhœa both corneæ soften in the shortest time, and the process terminates extremely unfortunately, with phthisis bulbi.

(ad 3.) *Subcutaneous Cellular Tissue.*—In many syphilitic children small abscesses form in the subcutaneous cellular tissue, which have no connection with the lymphatic glands. Whether the abscesses are opened with the lancet, or whether they break spontaneously, the orifices, in all instances, become ulcerated, and cicatrize only after a long

time, with intensely-colored puckerings. Ulceration of the nails (onychia) is very often observed on many fingers and toes at the same time. These processes are also very tedious, especially when the fingers come a great deal in contact with the sugar-teat; the new nail then becomes rough, uneven, and misshaped.

The lymphatic glands, in the neighborhood of syphilitic ulcers, do indeed swell up consecutively; they seldom, however, pass over into suppuration. In general it may be said that the lymphatic glandular apparatus of children is much less affected by syphilis than by scrofula and tuberculosis.

(ad 4.) *Muscles and Bones.*—In very severe syphilis, which develops itself several weeks after birth, paralysis of the upper, less frequently of the lower, extremities occurs. These paralyses do not always extend over an entire extremity, nor are they always complete, for often a slight capacity of exercising some of the muscular groups remains behind.

The bones participate in hereditary syphilis very rarely only. Congenital fragilitas ossium, in which all the tubular bones may be broken into fragments with the least amount of power, and which naturally is only met with in still-born, or in children dying soon after delivery, has been claimed to be connected with syphilis of the parents.

This process, on the whole, is extremely rare, and, in the cases so far observed, the existence of syphilis was not by any means demonstrated in a satisfactory manner.

Periostitis and necrosis of some portions of the bones, a very usual process in secondary syphilis of the adult, occurs but very seldom in hereditary syphilis of the new-born child.

(ad 5.) *Glandular Internal Organs.*—Abscesses in the thymus glands, which have already been treated on page 281, are very much doubted as to being syphilitic, for the physiological cavities, which form in the atrophy and absorption of this gland, can scarcely be differentiated from abscesses.

*In still-born children, the progeny of syphilitic parents, true abscesses are observed in the thymus gland in some rare instances; it is, however, necessary to guard against the possibility of mistaking the physiological cavities which contain a white fluid, and which occur in all children, for abscesses. The contents of the former always react acid, those of the latter, like pus, alkaline. In general, it should be observed that, in most children who die from hereditary syphilis, *no* purulent cavities of this kind can be found. I have already dissected at least a dozen such children, but only once found a cavity which

*This paragraph was accidentally omitted from the section which treats of the affections of the thymus gland, page 281.—Tr.

resembled more an abscess than a physiological cavern; the chemical test was unfortunately omitted. *Bednar* has also observed cystic formations in the thymus of syphilitic children. In some cases, he found cysts of the size of beans, filled with clear, yellowish fluid, and, in others, the whole lobes were converted into two large, yellow cysts.

The morbid alterations of the liver have already been described on page 210. In the lungs, spleen, and kidneys, gummy tumors of a specific character have been found. Most of the children thus affected come into the world with a bullous eruption, and invariably die in a few days.

Course and Termination.—As soon as the first signs of hereditary syphilis have appeared, which commonly happens, with the exception of congenital pemphigus, in from one to six months after delivery, the child begins to lose flesh, becomes restless, and soon acquires the characteristic, smoky appearance of the skin. Children, who are about to be brought up by hand, succumb usually to anæmia, or to a supervening intestinal catarrh. Children at the breast, under a proper treatment, recover tolerably often. The later the syphilis comes on, the more favorable the prognosis; the earlier, the more unfavorable.

Etiology.—In the great majority of cases hereditary syphilis descends from the father, not from the mother. If the mother is afflicted with secondary syphilis, the pregnancy will hardly ever go on to its natural conclusion; an abortion, or, at least, a premature delivery, will take place. This, in fact, happens also, although less frequently, in secondary syphilis of the father; the pregnancy here usually terminates normally, but the child comes into the world either with pemphigus syphilitica, or manifests the above delineated signs of hereditary syphilis in the first six months of life.

When the father suffers from secondary syphilis, the mother may remain uncontaminated, and nevertheless give birth to a syphilitic child; conception and delivery of such children may even be repeated several times without the mother becoming infected in the least. This often-confirmed fact is all the more remarkable, as the fœtal blood communicates directly with the maternal, and the fœtus acquires syphilitic pemphigus *in utero*.

Secondary syphilis descends only from the mother when she becomes infected with primary before or during pregnancy, and subsequently manifests the secondary symptoms. When the mother only becomes primarily infected during the last three months of gestation, the offspring will remain uncontaminated. It seems very improbable that a healthy child could become infected from primary ulcers on the

labia, with which it may come in contact during the act of delivery. The children are covered with a thick layer of vernix caseosa, and have suffered no loss of substance on any part of the body; in this case they would also have to have a primary chancre before the secondary eruption breaks out, a condition that is scarcely ever observed.

There is another remarkable fact, namely, that a child, who inherited its cachexia entirely from the father, the mother being sound, will never inoculate its own mother, while a healthy wet-nurse, who undertakes to suckle such a child, becomes infected as a rule. There results from this the therapeutically important principle that a syphilitic child may readily enough be allowed to be suckled by its own mother, but never by a wet-nurse, for the latter, if she should happen to become inoculated, may justly hold the physician responsible.

The manner in which a syphilitic nursling infects a healthy wet-nurse is not always demonstrable. The simplest manner in which the inoculation may take place is by the ulcers on the lips of the nursling coming in contact with a sore on the nipple of the breast of the wet-nurse. Occasionally it is observed that the breasts of the wet-nurse remain uninjured, and symptoms of constitutional syphilis come on notwithstanding. Conversely, it also happens, that a syphilitic wet-nurse transmits syphilis upon a healthy child, without the nipples of her breasts having been diseased. There is no necessity at all to resort to a transmission by the milk to explain these cases. Contact of the child with the mouth of the wet-nurse, or with her fingers, which shortly before had touched syphilitic parts, seems to be the more likely cause.

It is not absolutely the rule that a father who is affected with secondary syphilis should always beget syphilitic children. A considerable number of children remain free from all kinds of cachexiæ, while the fathers are well known to be strongly tainted. The children of a father are least susceptible, whose syphilis is already very inveterate, has left the skin and mucous membranes, and has become located as tertiary syphilis in the bones.

Treatment.—Mercury acts extremely quickly and beneficially in syphilis of small children, and, in fact, best when applied in an endermic manner. For a number of years past I have ceased giving mercurial preparations internally—calomel and mercurius solubilis Hahnemanni * are most frequently used in this manner. I order ʒss—ʒj of blue mass to be actively rubbed in every day upon portions of sound skin, of which enough may always be found in every case. When the ointment is rubbed in, in the evening, a bath may be given

* Black oxide of mercury.—Tr.

on the next morning without any detriment to the cure, and after that the inunction is repeated.

The local ulcers are best treated by the application of small compresses, wherever they can be applied—dipped in chamomile tea; the fissures and ulcers on the lips improve visibly by touching them several times with nitrate of silver. Baths, with corrosive sublimate, of which ʒi—ʒi is advised to be used in every bath, are expensive and dangerous to the child and its attendants, and, where the treatment is judiciously carried out with inunctions, may be dispensed with. The internal use of iodine can seldom be continued long enough in small children, for derangements of the digestion and a quicker progress of the marasmus are thereby frequently induced.

The diet should be as nutritious as possible. Children who are nurtured at their own mothers' breasts have the best chance of recovering. In artificially-fed children, the chief task will be the avoidance of diarrhœa, which may be attained by a carefully-prepared diet and demulcent drinks. When we succeed in this, the children will surmount the syphilis.