

easily incorporated with the bath is tar, and the so-called tar baths are often of more use in prurigo than in psoriasis. The tar bath is taken thus: The affected surfaces are painted in part or *in toto* (the latter is to be avoided, owing to the absorption of the tar, with subsequent symptoms of intoxication) with a solution of tar in ol. cadini or rusci; the patient then gets into the bath, remaining one-half to one hour, then washes thoroughly, and slightly rubs simple ointment or vaseline into the skin.

The sulphur and tar remedies may be employed in prurigo with or without baths. Patients with moderate prurigo may take a simple prolonged full bath, subsequently rubbing in some sulphur or tar ointment; for instance: ℞ Lactis sulphuris, 5 grams; Ol. cadini, 2.5 grams; Glycerini, 10 grams; Ung. simpl., 40 grams; M. S. ointment; or ℞ Naphtholi, 3 grams; Ung. simpl., 60 grams (Kaposi). Dusting the anointed parts with a mixture of starch and rice-flour facilitates the intimate contact of the ointment with the skin. In more intense prurigo, with considerable infiltration of the skin and copious crust-formation, the affected parts may be well rubbed with soft-soap or solut. Vlemineckx previous to the bath, and subsequently anointed with sulphur-tar ointment. When improvement has set in, the soft soap may be omitted, and we employ only the tar baths; subsequent to each bath the skin is greased with simple cerate or fat. In many patients, besides, the itching is diminished by wearing close-fitting under-garments of tricotee or flannel, as well as caoutchouc clothing.

When the itching is most intense at night, the patient is to use the baths with the other remedies in the evening before retiring.

Sublimate baths have not done me near as good service as the treatment above given.

By this plan, if persistently carried out, we have always secured improvement and temporary cure. But we are unable to prevent relapses, and in many cases we can do nothing but modify this treatment and, in intractable forms, we employ the several remedies for some length of time, and thus give the patient a better chance for improvement. The same method of treatment in a milder form applies to children as well as to adults.

The vesicular and in part also the bullous affections are also trophoneurotic diseases, and vesicular eruptions break out after nerve lesions—a fact clearly denoting the neurotic influence in the formation of this efflorescence.

The type of the vesicular affections is

HERPES.

In 1798 Willan and Bateman gave a clear and distinct definition of herpes which even to-day must be recognized as correct and appropriate. According to our present definition, herpes is a cutaneous affection, characterized by a series of transparent vesicles on a slightly reddened base; they are mostly the size of a hemp-seed, joined into groups, and follow the direction of some cutaneous nerves; they dry in the course of a few days (eight to ten), while their whitish serous contents become turbid; they disappear leaving pigmented spots of brief duration. When this process is several times repeated, this typical course is remarkable, but not especially characteristic; of far more importance is the painfulness which, however, generally occurs almost exclusively in herpes zoster.

Herpes tonsurans is a parasitic affection, and as such has in common with the vesicular dis-

eases here discussed merely the manner of its first appearance in the shape of vesicles and it would be more appropriate to designate it only by the term *tinea* or *trichophyton tonsurans*.

Willan divided herpes into several varieties, namely, herpes phlyctænodes, zoster, circinatus, labialis, præputialis, and iris. This division corresponds to the natural condition and might be retained even to-day; but as the *έρπης φλυκταινώδης* is nothing but the generic term for vesicular affections, herpes phlyctænodes really represents no variety, and therefore may be dropped. Hence we notice only the other species, and shall treat of them in the following order: 1. Herpes labialis; 2. Herpes præputialis; 3. Herpes zoster.¹

1. *Herpes facialis* (Hebra); *Herpes labialis* (Willan).

The term herpes facialis derived from Hebra is far more appropriate than that employed by Willan; for, although this form occurs most frequently on the lips, it appears also on other parts of the face, such as the cheek, the nose, the eyelids, and the ears. The number of the vesicles joined into groups is not constant; their appearance is usually preceded by a faint redness (erythema). Should herpes occur simultaneously on the upper and lower lip, it is called herpes bilateralis. On the lip the vesicles are usually found near the vermilion border; the several efflorescences are not always sharply defined; the outlines blend, and we then see, instead of numerous small vesicles, a single bleb often the size of a pea. The contents of the vesicles usually dry after three to six days into a brown or yellowish crust which falls spontaneously. If the crust be detached before it has dried up, the healing is rendered more difficult, a red weeping surface remaining behind which dries into a still more firmly adhering scab.

It is customary to consider herpes labialis as the consequence of a morbid disturbance within the organism, and it cannot be denied that herpes at times shows itself in some febrile conditions, with the subsidence of the pyrexial symptoms. Often it is a concomitant of grave diseases, especially intermittent fever and inflammations of the thoracic organs.

In such cases it has no prognostic value, for grave diseases may equally often run a favorable or unfavorable course, without being at all associated with herpes.

Bleuler² collected the statistics of 216 cases of pneumonia in which herpes was present 88 times; among these, in 44 deaths, herpes was found 14 times—proof sufficient that herpes is not always to be looked upon as a favorable prognostic sign.

In some cases the herpes vesicles appear also within the mouth, on the mucous membrane of the tongue, the pharynx, the tonsils, but the presence of the vesicles there cannot always be clearly demonstrated, the oral secretion soon producing maceration of the thin mucous layer and destruction of efflorescences. In their places there appear on the mucous membrane reddish spots denuded of epithelium which are painful and render alimentation difficult. Often it is hard to distinguish herpes of the mucous membranes from aphthæ, and in that case it will be necessary to ascertain whether herpes is present on the external skin. This process is frequently connected with affections of the stomach or abdomen, and we must never fail to direct attention to this circumstance.

Herpes labialis is a quite painless cutaneous affection, and the slight tension and burning of the affected parts are its only disagreeable symptoms. Finally we must point out that not all kinds of herpes occurring in the face belong to facial herpes; but that

¹ Herpes iris and circinatus we have already described with the erythema of the same name.

² Bleuler: "Klin. Beobachtung über Pneumonie." Zürich, 1865.

herpes zoster may likewise appear in the face, especially in the region of the eyes (zoster ophthalmicus).

2. *Herpes Præputialis, Progenitalis (Hebra).*

It occurs both on the prepuce (the external or the internal fold) and on the glans penis. The skin is but slightly sensitive, at times itching, and the several vesicles are in groups or singly on a somewhat reddened base. After a brief existence, the contents of the vesicles become turbid, they dry and crust so that the herpes is visible only in the first twenty-four to thirty-six hours of the disease; later, crusts, scales, or slight excoriations are all that can be found. These excoriations or somewhat moist spots, resembling ulcers the size of a hemp-seed, not rarely give rise to the suspicion, especially when they occur isolated, that we have to deal with specific ulcers and thus might occasion diagnostic mistakes.

This form of herpes occurs not only in men, but also in women, though much more rarely; and the vesicles or other excoriations are found on the vulva, together with considerable hyperæsthesia (herpes vulvaris s. pudendalis).

In order to avoid diagnostic errors between herpes progenitalis and syphilitic ulcers, the practitioner must exercise the utmost caution. Professional syphilographers have proposed to try inoculation in doubtful cases, knowing that syphilis, by auto-inoculation, produces chancre, while herpes cannot be inoculated. Such controlling experiments could be made in isolated cases, but as a general rule they are not necessary, if we bear in mind: *a.* The duration of the efflorescences (herpes heals within eight to ten days without leaving a trace behind), and *b.* the mode of treatment. Every cauterization of an herpetic excoriation may produce an indurated surface. It is best, therefore, in doubtful cases, to delay any active treatment and employ indifferent remedies—lead or zinc ointments (1:10), lead-water lotions, dusting with starch—until time enough has elapsed to clear up the diagnosis. But should it be found that the diseased spot enlarges, and a purulent secretion takes the place of a watery exudation, the presence of a specific ulcer will no longer be doubtful.

In most cases, we can determine, from the statements of the patients, that the outbreak of the efflorescences usually occurs a few days after the influence of certain irritating conditions (coition, onanism, pollutions). In some cases under my observation, the occurrence of herpes took place several times so obviously after coition that a connection between the genital function and the herpetic eruption seemed indubitable, and the increased irritability of the genital nerves could be suspected as the most intimate cause of the efflorescence.

Plumbe considers herpes præputialis the outcome of a disturbance of digestion; Bazin, the consequence of a diathesis; while other authors have specially emphasized its correlation with specific genital affections.

A few authors regard it as a neuralgic disease. But Mauriac's conception seems to be very comprehensive; he, like Bärensprung, brought genital herpes into such an analogy with zoster as to look upon irritation of the sacral plexus as the real pathogenetic factor; but he is in error when he assumes an arthritic disposition in support of this view. The neuralgic cause in itself suffices to explain this malady, which, in the character of the vesicular eruption, clearly displays its etiological relations with the other herpetic affections.

"Leçons sur l'herpès neuralgique des organes génitaux." Paris, 1877.

The peculiarity of herpes progenitalis of relapsing frequently is in no other species of herpes as pronounced as in this one, and the cause thereof is not clear; at all events, this observation deserves some consideration diagnostically.

3. *Herpes Zoster or Zona.*

Symptomatology and Pathogenesis. Zoster is an acute cutaneous disease, extending in the skin along the direction of a nerve-twig; it appears with groups of vesicles, is more or less painful, does not run a typical course, and ends by drying up of the vesicular contents and temporary change into another local process. The beginning of the disease is often preceded by general malaise and feverish conditions lasting a few days, and it is conjoined in some patients with fixed pain at some part of the body. After the lapse of one or two days, we find on the painful spot a reddened patch. But often no general indisposition precedes the cutaneous affection, and the patient's attention is attracted by some abnormal sensation in the skin. Zoster then appears in the shape of several vesicles joined into groups, six to eight or ten in number, looking like small whitish or yellowish pearls, filled with a thin serous fluid; for three or four days they remain stationary, at times they also increase, spread, or unite into larger bullæ. When the efflorescences begin to dry up, the vesicles become faded and limp, the underlying skin grows pale, and there are formed yellowish-brown, moderately thick crusts, which fall off spontaneously in a few days. This process is not uniform, for wherever zoster occurs, the groups of vesicles, according to the implication of the nerve-twig, continue to develop along the latter, so that the course of such morbid process may occupy from three to six weeks.

A concomitant phenomenon is often presented by violent neuralgias radiating in the direction in which the eruption spreads. At times the pains are of moderate intensity; in a few cases, however, they are of a terrible character. After sleepless nights and days passed in agony, the patients become dejected and weak, emaciate (in one of the cases under my observation the circumference of the body decreased in two weeks by twelve centimetres), and frequently require considerable time to regain strength after recovery.

Often the patients feel compelled by the violent pains and the accompanying itching to ease the affected portions by scratching; but thereby the vesicles are torn open, and thus ulcers form which at times are slow to heal. Not rarely, however, ulcers occur without such external provocation, and this transformation of the vesicles is an important symptom in favor of the trophic nature of the affection. Many physicians had ascribed the pain to the pressure of the vesicles on the peripheral nerve expansions and sought the causes of the neuralgia in the anatomical condition of the cutaneous disease. However, this view had to be abandoned as soon as the existence of zoster began to be brought into causal relation with affection of central or peripheral nerves. At the present day herpes zoster stands as the type of a neurotic affection, for often coarse anatomical lesions are found in connection with it. The causes of zoster may be either of a traumatic or a pathological nature. The number of authors who have considered zoster a disease based on a neurotic disturbance is quite large.

Cases of zoster referable to a traumatic cause have been described by Rouget,¹ Rey-

¹ Journ. de Physiolog., 1859.

naud,¹ Oppolzer,² Verneuil,³ Paget,⁴ Weir Mitchell,⁵ and many others. By such experience it came about that in cases where no trauma could be demonstrated, the causes of zoster were sought in other factors, and thus the knowledge was acquired that pathological lesions of the central nervous system are likewise followed by eruptions of zoster. The nature of zoster thus received its correct interpretation; for not only were the vesicular eruptions occurring with nervous symptoms on the trunk included in this dermatonosis, but those groups of vesicles on all parts of the body which followed preceding neuralgias and were confined to the direction of a nerve twig. Charcot and Cotard⁶ have seen a case in which all branches of the cervical plexus on the right side were attacked by zoster, and at the autopsy the spinal ganglia and the nerve trunks were found swollen and injected, while the roots of the cervical nerves and the upper part of the medulla appeared perfectly normal; and thus eruptions of zoster may break out in the most various regions. Hutchinson⁷ and Hybord⁸ have grouped together a large series of cases of zoster frontalis and ophthalmicus, in which, besides the neuralgias, considerable disturbances of sight existed. Brown-Séguard⁹ observed an intense eruption of zoster along the branches of the brachial plexus in a case of spinal meningitis. Bärensprung's¹⁰ case is universally known; as early as 1861 he had thoroughly established the neurotic nature of zoster, and in a case of pectoral zoster he found at the autopsy an inflammation of the spinal ganglia of the posterior roots and the thoracic nerves springing from them. Bärensprung's assumption, that only the ganglia are affected in zoster, suffers some limitation by the fact that sometimes the intervertebral ganglia have been found intact, while the spinal cord proper was altered, and the cases of tabes or of spinal sclerosis followed by zoster also help to establish this fact clinically. Zoster usually occurs but once, still cases are on record of several relapses of this disease, and Kaposi¹¹ in particular reports a case in which, in a comparatively short time, zoster relapsed five times in the domain of the right cervico-brachial plexus, always in the same region; later, for the sixth time in the same patient, a lumbo-sacro-crural zoster occurred, likewise on the right side, while a seventh, eighth and ninth outbreak of the cervico-brachial zoster in this patient followed on the left half of the body.

Examples of zoster due to disease of the ganglionic system are more numerous than those dependent on affections of the spinal cord; hence the central nervous system is justly considered the starting-point of many similar cases. In frontal and cervical zoster, the brain and the medulla oblongata; in that occurring on the trunk, the cord may be designated the seat of the lesion. Less frequent are the cases in which zoster appears as a reflex neurosis. Dr. Jewel¹² observed a crural zoster which must be considered a sequel of a grave uterine disease, for with the remission of the latter, the zoster and the intense neuralgias receded.

¹ Thèse de Paris, 1862, p. 156.

² Allgem. Wien. med. Zeitung, 1866, No. 48.

³ "De l'herpès traumatique." Mémoires de la Société de Biologie, 1873.

⁴ "Surgical Pathology." London, 1863, i., p. 43.

⁵ L. c., p. 167.

⁶ "Leçons sur les maladies du système nerveux." Paris, 1880, p. 29.

⁷ Ophthalm. Hosp. Rep., Oct., 1866, p. 166.

⁸ "Du Zona ophthalmique." Thèse de Paris, 1872.

⁹ Comptes rendus de la Société de Biologie, 1870, p. 45.

¹⁰ "Beiträge zur Kenntniss des Herpes Zoster." Charité-Annalen, 1863.

¹¹ Wien. med. Wochenschr., 1874, 1875-1877.

¹² Transactions of the Amer. Neurological Asso., New York, 1875.

In addition to neuralgia, we observe in zoster at times another sensory disturbance—*anæsthesia dolorosa*, *i. e.*, anæsthesia of the skin with simultaneous considerable painfulness. The explanation of this symptom is not difficult: As the cause of the pain lies in the sensory root of the spinal cord, a pathological process (exudation into the neurilemma, pressure of a new-formation, etc.) may intercept conductivity toward the periphery, thus inducing anæsthesia.

The nervous symptoms in zoster are not only of a sensory, but also of a motor nature, for paralytic conditions outlasting the exanthem occur at times. Broadbent¹ reported a case of a woman aged 74 years, who, without demonstrable cause, felt burning and stinging pains on the side of the right arm and nucha; shortly afterwards, zoster appeared, covering the shoulder, upper and fore-arm; a week later, there was partial paralysis of the arm which remained permanent. Duncan² observed complete paralysis of the right arm and leg, while the side of the face was free from paralysis, in a case of thoracic zoster in an old woman, after a neuralgia lasting several days and before the vesicular eruption broke out; the zoster and the incomplete hemiplegia persisted nearly three weeks and disappeared altogether.

That zoster may appear on both halves of the body cannot be denied at the present time.

Bärensprung divided zoster into nine varieties according to the locality; Hebra recognized only seven, viz.:

- a. *Zoster capillitii*,
- b. " *faciei*,
- c. " *nuchæ s. collaris*,
- d. " *brachialis*,
- e. " *pectoralis*,
- f. " *abdominalis*,
- g. " *femoralis*.

a. *Zoster capillitii* is localized on the anterior and posterior portions of the scalp and extends along the twigs springing from the second branch of the trigeminus. This does not apply to all cases because, according to the above division, zoster ophthalmicus³ comes under this head and the affected sensory twigs spring from the first branch, this being especially the case in zoster eruptions along the frontal and supra-orbital nerves. On the posterior scalp zoster extends along the occiput to the vertex, in the direction of the great occipital nerve.

b. *Zoster facialis*.—Hebra gives as the seat of this form the anastomoses of the facial nerve in the skin of the face. But the facial is a purely motor nerve, and as disturbances of motility are rarer than those of sensibility in this form of zoster and the neuralgias followed by herpetic eruptions, it is more appropriate to trace the pains to affection of the sensory, and not the motor fibres. But the sensory nerve-fibres in the face are derived from the trigeminus, and spread in the cheek, nose, lips, and chin;

¹ British Med. Journ., 1860.

² Journ. of Cutan. Medicine, London, 1868, p. 242.

³ Zoster ophthalmicus has been more thoroughly studied not long ago, especially by Hutchinson, and the skin disease proper interpreted as the cause of some disturbances in the eye, such as photophobia, iritis, ulceration of the cornea, etc. Baumann, Jefferies, Weyss, and other ophthalmologists have repeatedly noticed the appearance of this form which at times causes, besides the above local symptoms, grave sequels like panophthalmitis, phlebitis in the globe with subsequent meningitis and a fatal issue.

hence the anastomoses of the seventh pair with the trigeminus are affected with neuralgia in facial zoster.

c. Zoster nuchæ s. collaris.—The vesicular eruption extends from the region of the cervical vertebræ either forward toward the clavicle, or upward toward the occiput and the auricle.

d. Zoster brachialis.—It extends usually from the first cervical and the first dorsal vertebra over the upper margin of the scapula, and spreads toward both the extensor and the flexor side of the upper arm. The groups of vesicles are not always in a continuous line, but broken by interspaces; the exanthem, however, may often be observed on the arm only, without affecting the skin over the vertebræ.

e. Zoster pectoralis is the name of the eruption springing from below the first dorsal vertebra; its territory embraces the skin of the thorax to the lumbar vertebræ. Its points of origin are assumed to be those vertebræ where the zoster arises, and its course, those intercostal spaces along which it extends. The intercostal nerves are usually implicated, and the concomitant neuralgias generally so violent as to lead to the suspicion of an incipient pleuritis if the vesicles have not yet appeared. Recently I observed a case of pectoral zoster in a woman aged fifty years; the groups of vesicles sprang from the spinal column and extended to the axillary region, spared the part of the skin covered by the arm, and then continued in the same intercostal space as far as the sternal region. This case was accompanied at the same time by the most violent neuralgia for six weeks, without cessation. At the present writing I have under treatment a similar case of pectoral zoster; it springs from the third dorsal vertebra, extends towards the left as far as the thorax, and covers nearly 10 cm. in breadth; some offshoots pass along the inner side of the upper arm; there has been absolutely no pain during the several weeks of its course.

f. Zoster abdominalis.—Its points of origin are the lumbar vertebræ, and the eruption spreads over the abdomen as far as the median line. The pain is often so considerable that the activity of the abdominal muscles is interfered with, and the patients, if constipated, are sometimes seized by attacks of pain during defecation.

g. Zoster femoralis takes origin from the buttocks, and extends along the thigh, partly in a peripheral direction from behind forward, or along the extremities as far as the popliteal space.

Etiology of Herpes.

The explanation of the phenomena of vesicular eruptions is based on the fact that affections of the nerves are frequently followed by outbreaks of vesicular efflorescences.

But we must not go too far, and transform this experience gained at the bedside into a general doctrine, for not every neuralgia or disturbance of innervation, whether of central or peripheral origin, is connected with herpes; were this the case, the latter would be the most frequent of diseases. Nevertheless, the dependence of vesicle formation on these conditions has been so indisputably determined that this interrelation is one of the few more exact etiological facts we possess in dermatology.

With the various species of herpes we have given some points in the etiology and shall add merely a few short observations.

As regards facial herpes the explanation of its coincidence with or without pyrexial conditions is not sufficiently clear. Gerhardt¹ insisted years ago that the fibres of the

¹ Jenaer Zeitschrift f. Medicin, 1865, p. 345.

trigeminus are irritated by the fever. If the small arteries which run with the nerves through narrow bony canals contract during the cold stage, they dilate again in the following hot stage and press within the narrow canals on the nerve twigs which then lead to the vesicular eruption. This view has something taking in it, but it explains the process only in part, for herpes facialis is not always present in feverish conditions, appears with equal frequency without fever, is invariably painless, and is rarely bilateral.

In reference to herpes progenitalis we have already stated its dependence upon irritation in the genital apparatus, and as to herpes zoster, we can add nothing to what has been stated in the symptomatology.

Prognosis.

This is favorable; for excepting zoster, the various forms run a rapid course and disappear without leaving any sequela. Transition of zoster into other local affections may sometimes be observed; thus, in one case ending fatally, I saw zoster develop into general pemphigus.¹ Other sequels are sensory disturbances, and ulcerations within the zoster efflorescences. Patients suffering from zoster need not be restricted in any way; they may follow their avocations unless some functional disturbances occur. Should the disease be prolonged, we have usually to deal with the sequels of the affection (paralyses, sensory disturbances).

Treatment.

The treatment of herpes is expectant and symptomatic. The former applies to the forms running their course without unpleasant symptoms; the latter to the alleviation of the grave concomitant conditions. It is only necessary in the painless forms of herpes—labialis, progenitalis, iris, and circinatus—to employ indifferent substances to protect the diseased surfaces against dirt, friction, etc. It is not advisable to hasten the drying of the vesicles by removing their contents by puncture; nor is it good practice to tear off the crusts. It is best to place thin layers of linen, coated with a pure fat, vaseline, or an indifferent ointment, upon the vesicles. If it be desired to use some medicament, the ointment may be mixed with carbonate of lead or oxide of zinc (1:10 to 15). In place of the ointment, dusting powders may also be employed, such as rice-starch flour, powdered soapstone, etc.; the latter are to be exclusively recommended for herpes iris and circinatus, while for the other forms of herpes the above-named ointments are more appropriate. For herpes progenitalis an indifferent or drying ointment of zinc or bismuth is to be recommended, because in doubtful cases this will best decide whether it is herpes or syphilis.

What has been stated applies likewise to herpes zoster, especially those cases which are free from attacks of pain, or other incidents. Physicians finally became convinced, after many tormenting and energetic modes of treatment, among which laxatives and venesections were not omitted, that the pain of the disease could be moderated merely by soothing and quieting remedies, and this led to the only rational method—the symptomatic treatment of zoster.

It is barely worthy of special mention that against this affection the whole array of narcotics has been employed in the form of ointments, plasters, cataplasms, and internally; and, according to the results, the several agents were credited with corresponding value as real remedies, not only formerly, but even to-day. We shall specify some of

¹ "Neuropathische Dermatosen," p. 146.