

appearance as an avenging Nemesis where the patient has sinned much in baccho et venere.

Furuncles occur with relative frequency from the age of puberty to middle life in both sexes. This evidently is due to the constitution of the integument, the development of the glandular structures, the follicles, and the growth of the hair.

To judge from previous observations, I think I may state that individuals who have a rough skin (due to an accumulation of epidermis around the follicles), thick, dark hair and vigorous growth of hair are more predisposed to the formation of furuncles.

Furunculosis is said sometimes to develop epidemically when variola, erysipelas, and phlegmons prevail.

With the exception of the palms of the hands and soles of the feet, where furuncles are observed very rarely (Duplay), they occur in all parts of the integument. The spots of predilection are the buttocks, scalp, axillæ, back, neck, cheeks and eyelids.

Anatomy.—We are seldom in a position to examine in detail all the stages of the disease.

We may state with a degree of probability bordering on certainty that the inflammation arises from embolism of the capillaries around the follicles of the sebaceous and sudoriparous glands, and that, in the further course, mortification of the tissues with plastic infiltration in the vicinity occurs at the spot originally affected. If these conditions are once established, the other changes develop with a regularity peculiar to these processes. Pus makes its appearance, this loosens the detritus of tissue and, by a propagation of the inflammatory irritation, both contribute to the necrosis of the skin, the discharge of the contents, etc. The inflammation terminates spontaneously, because the pathological process is confined to a very small spot and the exudation is rapidly removed.

Prognosis.—The disease is absolutely mild, if uncomplicated by erysipelas or phlegmon. As Celsus had already remarked, it heals even without medical interference. The furunculosis dependent on a diathesis alone deserves more serious consideration.

Diagnosis.—The recognition of the disease can scarcely present any difficulties. Its circumscribed, sharply defined, rounded form, with the characteristic conical tip in the middle are unmistakable signs.

Treatment.—If there is any hope of abortive retrogression, ice compresses should be employed. They relieve the pain at least, and diminish the tension. If the furuncle has developed to such an extent that the consistence is already doughy, it is advisable to use poultices. The plasters, containing large quantities of resinous substances, but prepared without care, which are so warmly recommended by the laity, often produce ulcerations to an unwished-for extent. If fluctuation is present, it is best to divide the tumor, which should be done by one or more free incisions crossing one another. In this manner the necrotic connective tissue and the pus, substances which aid the continuance of the inflammation, are evacuated and the entire process conducted to its natural termination.

CARBUNCULUS, ANTHRAX.

The views of the past and present agree in this that the carbuncle is an acute circumscribed inflammation of the cutis and the subcutaneous cellular tissue, with fibrinoplastic infiltration, and which from several points leads to mortification of the affected tissue and, by its progressing character, to an extensive gangrenous process.

Symptoms and Course.—If we compare the characteristics of the carbuncle with those of the furuncle, a certain agreement cannot fail to be recognized. In both instances a prominent swelling upon a reddened and infiltrated base, which has pustules on its surface, develops in the places of predilection, *i. e.*, those provided with firm connective tissue and abundant adipose tissue (neck, back). If the course of the carbuncle is very mild, the infiltration very soon becomes circumscribed and the symptoms of the disease, which have reached their full development by the end of a week, then begin to retrogress. During the course of the next week, perforation occurs, varying according to the number of pustules, and giving rise to evacuation of the connective-tissue core and the pus, on account of which the severity of the symptoms diminishes and the entire appearance thus corresponds to the action of a number of furuncles. If the carbuncle takes an unfavorable turn, it has a greater significance than a severe furuncular inflammation. This is manifested spatially by the fact that the carbuncle often grows larger than the palm of the hand and spreads further at the periphery, even if perforation has already occurred in the central parts. In this manner large infiltrated spots result, occupying, for example, the half of the back; at many points they are interrupted by yellowish or discolored necrotic projections, between which the skin has been converted into a dark to bluish-red, thin bridge.

The further local course may be truly desperate, although the termination of the disease is not necessarily bad. The infiltration may increase constantly or at least continue unchanged, the circulation in the tissues be destroyed, the œdema increase, hemorrhagic vesicles develop at the periphery, the cutis die in its entirety, the suppuration spread into the adipose tissue and cause undermining with a very penetrating odor, exceptionally even implicate the fasciæ, muscles, and periosteum, and yet a standstill occurs, followed by the casting off of the cellular tissue, luxuriantly sprouting granulations, and a somewhat protracted convalescence. The only evil which certainly remains after a carbuncle is a cicatrix corresponding to the amount of the destruction, perhaps with sequelæ secondary to the latter. Experience teaches that the danger depends not so much on its extent and its spread deep down, but rather on its quality.

Trifling carbuncles, which never attain any considerable dimensions, may run a fatal course in an extremely short period in marantic individuals and after septic infection, and *vice versa*. The long prevailing opinion that the large and deeply-seated carbuncles are dangerous, because an absorption of poisonous substances readily follows, certainly cannot be regarded as generally valid.

We still have to devote a few words to the general disturbance so frequently present in carbuncles. Fever must be regarded as one of the most essential features. At the beginning it is usually proportionate to the extent of the inflammatory process; it becomes severe and assumes the typhoid character as soon as septic blood poisoning has occurred or internal organs have become affected to any considerable degree. Its significance is so much greater because usually individuals with depressed vital forces are affected by carbuncles and a large part of the fatal cases fall victims mainly to exhaustion. Profuse suppuration, extensive gangrene, severe and constant pains, and the like may also endanger the life of the patient. As a no less important complication we must regard the extension of the process to more vital organs, by which peritonitis, pleurisy, spinal meningitis, tetanus, etc., may develop.

Among the most serious forms of the disease is the carbunculus malignus (splenic fever carbuncle), known as malignant pustule, and which occurs chiefly in the face or

other parts which are kept bare. In a number of cases we are in a position to observe the direct transmission of the poison of splenic fever, but it may also happen that there is only a suspicion of such inoculation by flies, etc., and in still others this may be excluded with certainty. In my opinion, we must not associate with carbunculus malignus an etiological conception. The affection of the skin begins commonly with a slightly infiltrated spot as large as a grain of sago, which causes no pain and may readily pass unnoticed. According to the violence of development, the epidermis is elevated, after a few hours or within a day, in the form of a flaccid vesicle filled with sero-bloody contents, which becomes converted with equal rapidity into a brownish-red crust situated on a firm infiltration. If the course should be favorable, a standstill occurs after its extension to the size of a pfennig and the entire process then remains a local, circumscribed one. In the opposite event, the bluish-red infiltration spreads farther, the œdema becomes very considerable, the adjacent glands are markedly swollen, and the destruction progresses quite rapidly from the centre toward the periphery. The fever increases, vomiting begins, the intestinal tract becomes inflamed (intestinal mycosis), consciousness becomes more clouded, and death follows with symptoms of toxæmia (decomposition of the blood).

Etiology.—With the exception of those carbuncles which arise from bacilli or the specific poison of splenic fever, the same etiological factors which we have adduced with regard to furuncles and furunculosis hold good as the causes of this disease. (Tegumentary irritants continuing for a long time, and certain constitutional diseases, such as diabetes, uræmia, etc.) Even the sites of predilection are the same as in the case of furuncles. With regard to age, however, an essential difference is manifested; carbuncles occur especially in individuals of advanced age, or in those who are prematurely old.

Anatomy.—From the beginning to the end, the structure of the carbuncle is so similar in all essential respects to that of the furuncle, that even when different clinical symptoms become prominent, the anatomical agreement of both can be observed. We therefore refer you to that part of the chapter referring to this subject.

Diagnosis.—If we remember that the carbuncle is a circumscribed, tense, hard, prominent swelling situated in the subcutaneous cellular tissue, and which, if it softens, contains a number of necrotic shreds, and, if these are absent, appears perforated like a sieve, we will be saved from mistaking it for a furuncle, phlegmon, or erysipelas.

Treatment.—The method of treatment is indicated clearly by surgical principles. At the onset we should endeavor to relieve the tension and pain, and this may often be effected by ice compresses. If they prove insufficient, or are not tolerated by the patient, do not dread the possible hemorrhage, but make even at this stage free incisions, or apply Vienna caustic paste, and let it lie until the entire skin is converted into a dark scurf. If suppuration is present, vertical and transverse incisions, made sufficiently deep through the gangrenous swelling, constitute the best measure. By this means free escape is given to the pus, the inflammation of the parts relieved, and the absorption of poisonous substances combated by the diminution of pressure. The further treatment consists of the frequent (three to four times pro die) introduction of kali caust., camphor, Burow's solution, etc., keeping the wound clean or irrigation.

The general condition always demands the greatest consideration. We must endeavor to keep the fever down as much as possible, and to combat the loss of strength at an early stage by easily digested food and good wine.

ECTHYMA.

Willan was the first to bring the unmeaning term ecthyma into vogue. According to Willan-Bateman, ecthyma is an eruption of large phlyzaccial pustules, each situated on a deep-seated, inflamed, hard base, with a dark-brown to black crust on drying, and usually terminating with a superficial cicatrix. It is said not to be contagious, and to occur isolated over the entire body. They differentiated four varieties: *E. vulgare*, *infantile*, *luridum*, and *cachecticum*. The dermatologists who followed Willan accepted these views with rare unanimity. Alibert accepts the standpoint of Swediaur and believes that ecthyma can be replaced by phlyzacion, wherefore he includes it among the herpetiform eruptions. Hebra and Baerensprung stand upon a purely historical foundation and dispute the right of existence of ecthyma as an independent morbid genus, as it was employed originally only in the sense of exanthema and ethylata; Kaposi associates with it merely the pathological notion of a pustule. Starting from the Willan-Bateman definition, E. Wilson classes ecthyma among the furuncular affections. Not as though it presents a clinical picture similar to this, but rather on account of its frequent association with furuncles, its pyogenic character, and the formation of cicatrices, and because both often appear to be the expression of a lowered general condition. Among German specialists, Auspitz has recently expressed himself emphatically for the retention of ecthyma, but he believes that it should be placed in the class of superficial inflammations in the family of stasis catarrhs of the skin, on account of the venous stasis of the base and its termination with a new coating of integument. Some English and French writers assume the existence of a contagious ecthyma.

We have discussed the historical development of ecthyma in order to show the changes through which it has passed, and also that its existence is not undisputed even at the present time. If we merely consider the etymological meaning of the word ecthyma, there can be no doubt that, in the absence of a special pathological conception, it cannot be used to describe a variety of disease. However, dermatological nomenclature contains a sufficient number of such inexpressive terms. But in the present instance, the dilemma is so much the greater because we are not even able to erect a uniform clinical history. A number of authors since the time of Willan have indeed placed in the foreground, as an ecthyma eruption, the pustule situated on a reddened and infiltrated base, but the views concerning details differ to such an extent that some identify ecthyma with all kinds of trivial pustular eruptions, while others state that they have observed it in the course of gangrene and severe general symptoms. But if the subject is investigated without bias, it will be found that there is a pustular eruption in the Willan-Bateman sense, which occurs sporadically as a circumscribed inflammatory nodule, is converted, after a few days, into a pustule which may attain the size of a pea, and, inasmuch as the redness or infiltration increases for some time at the borders, the top of the pustule is perforated without any definite cause, and a loss of substance is produced. Such eruptions may occur in all parts of the body, but preferably upon the limbs, usually produce no noteworthy disturbances, and must not be mistaken for the pustules of scabies, prurigo, eczema, etc., for impetigo, or the ordinary furuncle. If we wish to apply to this form of eruption the term ecthyma which is at our disposal, we would undoubtedly be guilty of a slight usurpation with regard to the name. It would be admissible, however, in case of necessity, since we neither do an injury to any affection already known, nor would we produce any confusion; this involves less contradiction,

also, than when the synonym of the French writers, *furuncle atonique* (Guersant) is employed.

Although we are unable to demonstrate in every case the irritant which produces such pustular eruptions, we may nevertheless say this much, that we meet with it, often in large numbers, when the integument is unclean and not well cared for, particularly in delicate, sensitive, and also in badly nourished and feeble individuals. Sex causes no difference, but age does, as it occurs more frequently in poorly nourished children and marantic old people; vigorous, youthful individuals are rarely affected by it, and even then only by a few pustules.

The eruption is of no importance from a prognostic standpoint, as it recovers without medical interference.

So long as the pustule or crusty deposit is present, it is advisable to apply emollients such as oil, fat, etc. If the loss of substance has been laid bare, we may make use of the ordinary dressings.

ALEPPO EVIL, BISKRA BOUTON, DELHI BOIL, ETC.

The first mention of the local affection occurring in and around Aleppo is made in Pococke's (1745) report of his travels. He states that the water, which is conveyed to the city in aqueducts, has the property of producing boils (*botches*), and that it occurs once in the life of natives as well as foreigners, usually in the face. The first detailed description is furnished by the brothers Alexander and Patrick Russel. According to their account, the affection appears either once or several times, among the natives in the face, among foreigners on the limbs, is not contagious or hereditary, and is also not communicable by vaccination; it is not confined to Aleppo, but occurs in the entire vicinity.

It was learned, however, that a similar exanthem occurs in the valley of the Euphrates, in Egypt, upon Cyprus and the Sind, in the northern part of Arabia, in Algeria (*Biskra boils*), Persia, around Delhi, etc., and there extends over entire valleys and tracts of land. Willemin has therefore proposed to introduce the more general term "*tubercule d'Orient*" instead of the many special terms.

The drinking water has been regarded as the immediate cause of the nodules on account of the presence of magnesia (Jilt), salt (Poggioli, Weiss), alkaline and earthy salts (Massip, Netter), and organic substances (Bysson). Some assume that the gases escaping from marshy districts, and others that the climate are the producers of the germs of the disease. Flemming and Schlimmer conclude from their vaccination experiments that in the first stage of development, a substance (*Distoma hæmatobium*) must be present which is destroyed during the suppuration. Carter believes that the *Biskra boil* is a granulation tumor produced by a fungus, and that mycelium threads are found in the lymphatic vessels.

The descriptions of the disease are as manifold as the etiological factors. With the exception of the symptoms mentioned by the Russel brothers—that nodules form gradually under inflammatory symptoms, degenerate sooner or later and heal within a year, usually leaving behind disfiguring cicatrices—no description has hitherto held its own permanently. Each traveller to the Orient accuses his predecessor of inaccuracy. While Pruner places the Aleppo boil among the pustular exanthems, Rigler regards it as a furuncle. This is contradicted by Willemin who describes what, in our judgment, is a well-defined lupus. Pollak regards the "*salak*" occurring in Persia as a process allied to

lupus, but states that in Persia syphilis, scrofula, and the like are observed very frequently, but not lupus. Bertherand, on the other hand, regards the disease as syphilitic in its origin.

During my stay in the Orient, I became convinced that the diagnosis of Aleppo boil is applied to the most various exanthems, such as eczema, furuncle, lupus, syphilis, scrofuloderma, etc.

Treatment.—In general, the opinion is prevalent among the people that the boil, whatever name be applied to it, should not be treated, as its course cannot be shortened, and any interference renders the cicatrix which remains still more disfiguring. Nevertheless, we find that even Russel has recommended the "*mercurial plaster*" as a very effective remedy. Jilt states that sarsaparilla has proven most useful, as the affection is mainly of a scrofulous nature. A salve of pulp. cass. and butter is employed in preference by the inhabitants of Aleppo. The majority of physicians employ the most varied caustics, partly in order to hasten recovery, partly in order to obtain better cicatrices. Pruner recommends that compresses of lead water be applied at the onset and that later, during the stage of suppuration, the ulcers be strewn with powdered sulphate of copper. Pollak recommends cauterization with fuming nitric acid; Floyd advises washing with common salt; Rigler regards it as most advisable to open the boil by crossed incisions, and if, despite this, its course threatens to become prolonged, to cauterize the base of the wound a number of times with lapis infernalis.

In accordance with my views concerning the existence of the boil, I have not confined myself to a definite plan in the treatment of at least 200 bouton patients. (!) According to circumstances, *i. e.*, according to the scientific diagnosis, I have employed empl. neapolitanum, the Bruns-Volkman curette, nitrate of silver, or even merely a simple cerate, and have obtained very satisfactory results.