

tion having lasted from several hours to ten or eleven days, the second stage of the disease, *i. e.*, the eruption, is said to occur with or after profuse perspiration. A large number of nodules and vesicles from a millet-seed to a lentil in size appear on the skin of the neck, the breast, the gastric and abdominal regions, the extremities, and the back, but never in the face; often fresh crops break out for several days. The several efflorescences become only exceptionally confluent. The eruption has no influence on the duration or intensity of the fever. This is followed after a few days by the third stage in which the efflorescences dry up and the small scales formed are shed without leaving a trace behind. However, the process, *i. e.*, the fever and the morbid state of the organs or of the whole system, may advance or retrogress independent of the cutaneous lesion. As far as I could ascertain, there are no reliable post-mortem examinations of persons dead of miliaria. The affection is said to occur at all seasons, but more frequently in cool rainy than in warm dry weather; to spare no age, though children and old people are more rarely attacked; and to exempt neither sex nor station. Nothing definite can be learned as to predisposing factors or causes. Opinions differ also about the infectiousness of the disease; some writers hold it to be not all or but rarely transmissible, and ascribe the epidemics, usually occurring in remote country places, rather to uncleanness and unfavorable hygienic conditions generally. Plouviez claims to have observed several cases without eruption (*suette sans éruption*) during a miliaria epidemic.

If we review once more the whole series of symptoms in order to ascertain what is contained in the above descriptions essential to miliaria, what is the most prominent factor in the course of the disease given, and what it is that bears the impression of a peculiarity, we must confess that we are unable to find anything of the sort. At all times there have been physicians who have looked upon miliaria only as a symptom or even merely as an accidental occurrence, owing to its appearance with the most heterogeneous diseases. Thus Kreysig asks, "should not the miliary eruption, especially that associated with epidemic diseases, be considered a symptom, due to a consensual irritation of the skin?" Others deny the possibility of an independent miliary fever altogether, and look upon the miliary exanthem and fever as two sequels unconnected with each other. This is the standpoint taken by the great majority of clinicians at the present day. The points of difference at present existing refer to the immediate causes of miliaria. Ferd. Hebra is inclined to look upon "the occurrence of the eruption in each case as a product of a pyæmic process." Trousseau and his school assume a twofold, an idiopathic and a pyæmic origin. I for my part willingly admit that miliaria frequently occurs in the train of a pyæmic and of a febrile process generally, but cannot concur in the belief that it should be brought into direct causal connection with the latter.

Definition.—In my opinion, miliaria is a sudoral eruption appearing chiefly in the course of febrile diseases, and consisting of clear, dewdrop-like vesicles from a millet-seed to a pea in size; its occurrence is connected not so much with the kind of the fundamental affection as with the possibility of the predominance of the glandular secretion.

Course and Termination.—A febrile state having existed for several days, a crop of the above-described isolated vesicles breaks out, without any special prodromata, on the neck, trunk, or the inner surface of the extremities; the base and circumference of the vesicles show no abnormality. The contents of recent efflorescences always have an acid reaction and include only here and there a lymphoid corpuscle or an epithelial cell. A. Vogel has also found chlorine salts. When the vesicle is fully developed, it no longer enlarges; the only change it undergoes is that, as the contents evaporate, the cov-

ering epidermis becomes wrinkled, and after from two to four days the entire vesicle finally dries into an insignificant scale which is shed without leaving a trace. The duration of a single efflorescence is at most a few days, but the eruption in general may last one or two weeks on account of relapses. It has no influence whatever on the course of the primary affection.

Diagnosis.—Its delicate, dewdrop-like, always limpid appearance, the absence of alteration in the surrounding skin, characterize it sufficiently. It may escape notice when the efflorescences are so insignificant as to be felt better than seen.

Differential Diagnosis.—The pustules due to pyæmia and septicæmia most frequently give rise to mistakes. But if we bear in mind that in the latter the contents of the efflorescences are always purulent, that they occur scattered over the whole body, the differentiation will not be difficult even when both eruptions appear simultaneously. Similarly, the irregular aspect and occurrence of the bullæ in erysipelas will leave no doubt as to their correct interpretation. There may be greater difficulty in the case of pemphigus or febris bullosa. For in both diseases the eruption is preceded by fever, the efflorescences are confined to isolated parts of the body, and have a similar course and termination. But it will be observed that the bulla of pemphigus usually springs from an erythematous base, that its average size is larger than that of miliaria, and that in pemphigus every relapse is heralded by an exacerbation of the fever, while in miliaria these two conditions will coincide only by accident.

It will be mistaken for sudamina only in case there is a misconception as regards the differentiation of miliaria generally. In many works on skin diseases the two forms of eruption are still insufficiently separated. There are references to miliaria rubra when the surrounding cutis is reddened; to a miliaria alba lactea, when the contents of the vesicles are whitish turbid and the surrounding zone is normal or pale by reason of maceration of the epidermis; and to a miliaria crystallina, when the inclosed fluid is clear and transparent like water; the former two eruptions are typical sudamina, and the latter only is entitled to the name miliaria.

Treatment.—The best method of treatment is to leave the eruption alone. Should it occur at a place where it is annoying, the drying may be hastened by frequent dusting with starch, lycopodium, talcum, alone or mixed with oxide of zinc, cream of tartar, or salicylic acid in the proportion of 1 : 30 to 50.

2. *Ephidrosis.*—While considering the etiology of hyperhidrosis, owing to the inseparability of general from unilateral and regionary hyperhidrosis, we were repeatedly forced to refer to the latter. The same cause—let us assume, for instance, a lesion of the sympathetic—according to its seat and duration, and sometimes without ascertainable reason, will produce sometimes a diffuse, sometimes a partial hyperhidrosis.

a. *Ephidrosis Vola Manus.*—Excessive sweating of the palms of the hands is one of the most frequent local hypersecretions. This becomes particularly noticeable in mid-summer, when the abnormally increased secretion is still more augmented and the factor of continual evaporation is superadded. Such a hand sometimes feels clammy and sticky; sometimes again remarkably warm when the perspiration temporarily remits. On inspecting the palm, especially if the epidermis is not thickened, we notice even on the lateral parts of the fingers vesicles from a pin point or poppy-seed to a lentil in size, isolated, close together, or confluent (when they may reach the size of a cent) with clear watery contents; still more frequently, the vesicles have ruptured, the epidermis being lacking at their centres, while the periphery is limited by an irregularly fringed border.

Ephidrosis of the palms occurs almost exclusively in anæmic children and chlorotic,

dyspeptic, and cachectic adults, in women more frequently than in men. It usually affects both hands, but sometimes only one; it may remain unchanged for years, or temporary remissions and exacerbations may alternate. Frequently the tip of the nose—usually unheeded—and the soles of the feet are likewise subject to the same affection.

b. Ehidrosis Pedum.—The feet sweat much more than any other part of the body. Feet or soles of feet affected with profuse perspiration are moist even when uncovered and after but slight exertion make the impression as if they were bathed in sweat. On inspection, their whitish, dull, lustreless appearance, due to the macerated, loosened epidermis, is striking. When the hyperhidrosis has reached a higher degree and is of longer duration, irritation will be caused by the decomposed secretion, and by the shoes, the dust, etc. The simplest form of this irritation manifests itself by scattered painful red spots often occupying the larger part of the sole. Should the process advance, there is formed, just as on the palms of the hands, detachment of the epidermis of variable extent, due to the accumulated fluid, and the epidermis becomes still more undermined if the same causes continue.

Dyshidrosis (T. Fox).—In two cases of excessive perspiration I had an opportunity of becoming acquainted with quite a peculiar affection of the skin. Two middle-aged healthy men (college teacher and cattle dealer) sought my advice for painful sweaty feet. In the case of the cattle dealer, the soles of the feet were so sensitive that he had been unable for some days to wear any kind of shoe. On inspection the maceration of the epidermis of the whole foot and the partial reddening of the sole were very striking. Here and there the epidermis, without being noticeably lifted up, looked lighter in the deeper layer. On puncturing these spots, a small quantity of viscid or limpid pus oozed out. But that the same fluid had more extensively undermined the thickened corneous layer was unmistakable. This supposition was verified when the points of the scissors were pushed in sideways from the first puncture. By the side of these undermined patches of epidermis could be seen purulent elevations, pustules, or, where the latter were deprived of their covering, extensive denuded spots of the rete, from a lentil to a walnut in size. At the periphery of the efflorescences pus was present under the epidermis, and there was a stubborn tendency to further purulent infiltration. A similar process, only of slighter degree, had been present in the second patient for six years. The frequent use of foot-baths, careful trimming of the undermined epidermis, and the continual employment of diachylon ointment in the usual manner were followed by complete recovery in from four to six weeks.

T. Fox was the first to recognize this affection, and described it in 1872 under the name of dyshidrosis. According to this author, it is due to the retention of excessive perspiration under the epidermis. Hutchinson has termed the same affection cheiropompholix, and Robinson, pompholix; both explain it as a kind of pemphigus. This view appears to me altogether erroneous, if it be true that the process which I have observed is the same.

c. Hyperhidrosis in axilla.—Excessive perspiration in the axilla is of frequent occurrence. Often it is associated with diffuse hyperhidrosis, at other times with some ehidrosis, but it is equally frequent alone on both sides, or else on only one. Excepting the anatomical relations, *i. e.*, the superficial seat and generally numerous glands, which must be interpreted as predisposing factors, we still lack all knowledge as to its cause. From the presence of bacteria in the red axillary perspiration Eberth argues their causal connection with hypersecretion; my investigations, however, failed to convince me of the truth of this explanation.

The noticeably increased perspiration in the axilla of undressed persons is explained by Aubert in this manner: by the uncovering of the body the temperature in the axilla and at other similar parts, *e. g.*, the perineum, is raised 0.5° C., and, supported by the many sweat glands, this unusual hyperhidrosis then occurs.

Hyperhidrosis of the axilla betrays itself by the continual moisture, staining of the linen, and the frequently penetrating odor. Eczema frequently results at this part of the body if not kept clean and dry.

Treatment of Hyperhidrosis.—The therapeutic results obtained hitherto are of a subordinate or even doubtful nature as regards the direct, reliable removal of the hyperhidrosis. In substantiation of these remarks I shall cite the mode of action of atropine sulphate. I do not wish to be understood as saying that this drug (given in doses of 0.0015 to 0.003 Gm. a short time previous to the outbreak of the perspiration) is ineffectual; on the contrary, I believe that in profuse, especially night-sweats, as in phthisis, it moderates the perspiration for some time or possibly stops it altogether; but this effect is not always secured, is generally but temporary, purely palliative. Equally reliable, temporarily, as an antisudorific is white agaric (0.1 to 0.5 Gm.), also extract of aconite (0.03 to 0.06 Gm.), salvia leaves (Van Swieten), flor. sambuc. nigr., aqueous extract of strychnine (0.02 to 0.01 Gm.). The internal use of carbolic and salicylic acids is likewise said to have been effectual.

However, it seems to me more correct to adapt the treatment to the individual case, and hence the first task of the physician should be to ascertain the nature of the perspiration. In pronounced morbid conditions, the latter should receive the first consideration, as in diabetes mellitus, affections of the lungs and heart, morbus Basedowii, hysteria, migraine, neuralgia, etc. Should such pathognomonic factors not be demonstrable, we must ask ourselves if there be no masked constitutional affection—anæmia, chlorosis, scrofulosis, syphilis, cachexia, etc.—and if so, we should endeavor to counteract it effectually by corresponding roborants, arsenic, quinine, iron with arsenic, or specifics.

After these indications have been met, we may, according to the requirements of the case, resort to the above remedies, as well as to others recommended as specifics by various authorities; also, to electricity, lotions and baths of vinegar, tannin, corrosive sublimate, or solutions of salicylic acid (0.2–3 per cent); or else, to the various dusting powders which are said to act partly hygroscopically (amyl. tritic., talc. ven., sem. lycopodium, etc.), partly as antihydroa (salicyl, thymol, benzin). But in every case we must be guarded in our prognosis, and not be too sanguine as regards the result.

In the local hyperhidroses the prospects are in general more favorable.

Medical advice is sought most frequently with regard to those parts whose increased perspiration causes the greatest inconvenience, *viz.*, the hands and feet, the axillæ and genitals. In these cases, too, unless we wish to rely on spontaneous recovery, we have to be guided in our treatment by the elucidation of the etiological factors. The parts in question should be protected as much as possible from all those influences which normally favor perspiration. Thus persons inclined to perspire excessively should not wear dark, heavy clothing in summer; the rubber or oil silk dress protectors applied to the arm-holes of female attire must be laid aside; linen should be worn next the skin; and the foot coverings—stockings, shoes, etc.—should be light and be frequently changed. Locally, watery and alcoholic lotions and dusting powders should be applied. For the slighter forms of ehidrosis the following drugs, used in the manner stated, are appropriate: Acid. tannic. pur., 1: alcohol, 200; hydrargyr.

bichlor. corr., 1 : aqua, 350; sodium ammoniat., extr. aconiti, colombo, 1 : aqua, 200; aqua coloniensis æther., and other diffusible and volatile fluids. All these remedies are to be applied to the perspiring spot several times daily by means of a sponge slightly pressed on, allowing them to evaporate or dry in a current of air. In perspiration of the hands and feet, the drugs may be employed as ingredients of local baths. After this procedure, especially the alcoholic lotions, the patient experiences immediate relief, and in order to maintain this as long as possible, it is advisable to use dusting-powders. The latter are composed of amyllum tritic., oryzæ, talcum venet., rad. ireos florent. pulv., sem. lycopod., etc., to which are added as auxiliaries zincum oxid., plumb. carbon., acid. salicyl., potass. bitart. (0.5 per cent). To the interdigital folds and other parts which are in contact we may apply pledgets of lint strewn with one of the above powders; but they must be changed whenever they become moist.

The most difficult task is to relieve profuse perspiration of the feet. In the slighter degrees it is possible that one or other of the above procedures may suffice; in the graver forms success is rare; and this is also true of the substances recommended as antiparasitics (Thin: boracic acid). Thus far we know of but one mode of treatment devised by Hebra which is unequalled, namely, the methodical employment of diachylon ointment. To this end the foot is first washed clean, carefully dried, and then enveloped in a close fitting, clean, rather dense linen rag of appropriate form and size, which is spread with the well-known diachylon ointment to about the thickness of the back of a knife. In order to enhance its effect, pledgets of lint are laid between the toes. As the ointment should remain in continual contact with the skin, it is desirable that the patient should go to bed and either wrap the foot in flannel, or, if his occupation forces him to be up, to cover the foot with fresh stockings and shoes. After twenty-four hours, the linen rags are removed, the ointment remaining on the skin is gently wiped off with oil, and the foot dressed in another linen rag as before. This procedure is repeated in the same way for one or two weeks, and at the end of that time the foot is dusted thickly several times a day, especially at the transitional spots and between the toes, and kept scrupulously clean. While the patient was not allowed to take a foot bath during the entire treatment, he should be encouraged to do so thereafter. The symptoms appearing immediately after the treatment consist in exfoliation of the epidermis in large yellowish-brown flakes thickened by the application of the ointment, exposing a delicate light pink or pale epidermis. As a rule, after a single course of this treatment the ephidrosis ceases for some length of time, only exceptionally is it necessary to repeat the procedure two or three times before the object is attained.

B. HYPOHIDROSIS AND ANHIDROSIS.

Complete loss of the sudoral secretion is a rare occurrence, excepting on circumscribed spots where the sweat glands have perished with the destruction of the more deeply seated connective tissue; or on those where inflammations of the glands have been followed by atrophy, degeneration, occlusion of the opening and the duct (retention cysts); or on those where homœoplastic and heteroplastic new-formations appear and paralytic conditions arise in consequence of nerve lesions. Generally the perspiration is merely slower and less than normal; but these factors suffice to impart to the skin a dry, parchment-like rough feel. But we should speak of an anhidrosis only to a limited extent, for as a rule we are not dealing with this affection, but with decreased perspiration, hypohidrosis.

Hypohidrosis, like hyperhidrosis, may be general or local. The tendency to it may be congenital or acquired.

A general diminution of the sudoral secretion is rather frequently observed in a number of internal diseases, among others in such as are often associated with hyperhidrosis, as diabetes mellitus and insipidus, tabes dorsalis, elephantiasis Arabum and Græcorum, psoriasis, lichen scrofulosorum, neoplastic cachexia, and even in phthisis.

But their most appropriate territory is always furnished by the various neuroses. Thus far we are in possession of but a small number of cases of anhidrosis in which a demonstrable participation of the peripheral nerve trunks could be found; for instance, in paralyzes due to traumatic or mechanical lesions of the brachial, lumbar, or other plexuses. In all these cases arrest of perspiration persists until the galvanic excitability of the nerves is restored. A no less certainly established factor is furnished by the glossy skin, finger, etc., due to caries of a tubular bone, in which, early in the implication of the nerves, there is present pronounced hyperhidrosis. And in proportion as the paralysis develops, the secretion becomes less until it finally ceases.

The most pronounced picture of a paralytic anhidrosis is presented by the hemiatrophy of Virchow, in which all the tissues atrophy down to the bones. With such trophic disturbances of the skin we observe numerous other neuropathic symptoms, such as oft recurring inflammatory eruptions (eczema, herpes, and others), early loss of the hair, etc. It is evident that there is present here some implication of the facial nerve, but it is unknown as to what extent the trigeminus is implicated, and whether the hypoglossus does not likewise participate. The same fact is observed in infantile spinal paralysis, in which the sudoral secretion returns with the galvanic excitability of the nerve, with the recurrence of active mobility, and the nutrition of the extremity.

Hypohidrosis or anhidrosis forms an almost constant symptom in the sequels of diffuse myelitis and poliomyelitis. Strauss and Bloch hold this symptom to be of such importance that they use it as a differential diagnostic sign against paralysis of cerebral origin.

In affections of the sympathetic, we shall encounter hypohidrosis only in the case of irritations, usually due to mechanical or traumatic lesions. But this coincidence is not so constant as to enable us, in settling the diagnosis, to dispense with other symptoms of the neuro-paralytic condition, such as spastic mydriasis, pallor and reduced temperature of the skin, etc.

In general, therefore, we can say that, in so far as hypohidrosis is of nervous origin it is due, in the first place, to lesions of the anterior horns of the gray substance, very often to those of the motor nerve trunks and even their terminal portions (Leloir), and here and there to those of the posterior horns and some parts of the sympathetic.

The prognosis and treatment of anhidrosis always depend on the primary affection.

C. QUALITATIVE CHANGES OF THE PERSPIRATION. PARHIDROSIS.

The impossibility of obtaining the perspiration which has come to the surface in an absolutely pure condition makes it difficult to determine its normal constituents. How much more difficult will this be under pathological conditions, where there is an increase or diminution of the normal ingredients, an admixture of abnormal substances. Thus, it is well known that in anuria from nephritis cholericæ and scarlatinosa the excretion of urea on the surface of the skin is augmented to such a degree that after evaporation uric acid crystals often remain behind over extensive regions, while the quantity of the same

substance may sink to barely perceptible traces during the defervescence of a high fever and after profuse sweats. The same is true, under certain conditions, of the fatty volatile acids and the salts.

A large number of other substances have been found at times in the sweat, viz.: grape sugar (in diabetes), traces of albumen in the form of serum albumin, lactic acid, cystin, bile pigment, indigo, and other chromogens. Besides, a transudation after the ingestion of drugs has been proved; for instance, iodine after potassium iodide; sublimate after iodide of mercury; arsenious acid after arsenate of potassium, arsenic acid after arsenate of sodium and arsenuretted oxide of iron, copper after copper poisoning, hippuric acid after benzoic acid (H. Meissner, disputed by G. Meissner), tartaric acid.

It is to be expected that continued experiments and investigations will show that there are still others.

We distinguish the following qualitative anomalies of the perspiration.

1. *Chromidrosis* (Colored Perspiration).—In general this term is understood to mean every colored perspiration, whether it be yellow, red, dark-brown to black, or green. An exception is made only in the case of the blue perspiration for which a special title is employed—cyanhidrosis.

The originator of the term chromhidrosis, Le Roy de Mericourt (1858), published several cases that came under his observation, and subsequently (1864) endeavored to demonstrate the altered perspiration to the profession by instituting histochemical investigations (Ch. Robin). But owing to the fact that some eminent French clinicians met with mystifications by hysterical simulators (by means of plumbago, silver nitrate), doubts were raised as to the very existence of chromidrosis. However, within the last two decades, several cases have been described by observers whose trustworthiness does not admit of the least doubt.

I have hitherto had no opportunity of seeing a case of chromhidrosis, and therefore I must restrict myself to recapitulate the data which appear to me most credible. It is said to occur chiefly in females who are suffering from hysteria, menstrual anomalies, chloræmia and anæmia, with their associated nervous affection. Hardly a dozen cases have been observed in men, and then under the most heterogeneous conditions (hypochondriasis, phthisis, syphilis, etc.). Blue perspiration has thus far been most frequently met with, though the red, yellow, and black are not so very rare relatively. Chromhidrosis may occur on any part of the body, but has been observed most often on the lower eyelids, the forehead, cheek, abdomen, and, in men, mostly on the scrotum. The affection is equally frequent in summer or in winter. Its duration is not limited, sometimes lasting continuously for years, sometimes, with one or more relapses, disappearing for days, weeks, or years. It appears either on a small circumscribed spot or a more extensive surface, where it manifests itself, on the one hand, by a fine dust-like deposit, on the other, by discoloration of the epidermis and even of the lanugo. On such places, then, we see longer or shorter, straight or circular streaks of discoloration, which can be removed only with difficulty by rubbing with oil, glycerin, or by scraping. To guard against deception, Spring recommends the following procedure. The spot to be examined is carefully cleansed with oil, and when perfectly dry, collodion is painted on in a thin layer and allowed to remain for a few days. When chromhidrosis is actually present, it will show itself when the collodion pellicle is lifted off.

Foot believes that the color is due to oxidation of hæmatin, but chromidrosis is generally looked upon as the product of the sweat glands, and its occurrence is pre-eminently the result of nervous influence. Hence it is met with wherever nervous affections

manifest themselves. The views in reference to chromogen are not so harmonious. Ch. Robin and Ordonez, who examined a sufficient quantity of blue perspiration, found therein very minute, homogeneous corpuscles of irregular shape, which in thin layers had a color approaching that of indigo, but in thicker layers were darker and opaque. Concentrated sulphuric, nitric, and acetic acids are said to dissolve the pigment only gradually when hot. Accordingly, they consider this substance to be equivalent to that found by Bizio in the urine in cyanuria, and derive its origin from the epithelium of the sweat ducts. Schwartzbach found that the extract made from the impregnated linen by means of alcohol was colored red by mineral acids and green by alkalis. From this fact S. deduces the presence of a substance equivalent to the pyocyanin in blue pus. In Collmann's case of cyanhidrosis, Scherer's examination showed the presence of phosphoretted oxide of iron. Bergmann, in the case of scrotal cyanhidrosis, found on the equally discolored epidermis cells, chains of intimately interlaced conidia of a mycelium fungus which, when cultivated on paste, developed into a fungus resembling aspergillus. Experiments at impregnating pus with the blue flakes of epidermis failed altogether, nor did the chemical reactions furnish any information. C. B. Hoffmann found indigo in the blue perspiration of a paraplegic man of seventy-two, while the examination of two cases of red perspiration yielded no result except the presence of an "apparently amorphous mass." Eberth found bacteria both in normal and in "yellow" perspiration; Babesiú likewise found in the "red" perspiration of the axilla a form of fungus resembling bacterium prodigiosum, and states that the red color of the sweat stands in direct relation to the increase of this bacterium, and that red perspiration is transmissible.

2. *Hæmathidrosis, Bloody Sweat*.—It was not until the middle of the present century that the meaning of transudation of blood through the intact skin began to be appreciated, by being brought into connection with the sweat glands and declared to be an anomaly of secretion (Gendrin). *A priori* it must appear improbable that these glands had anything to do with the elaboration of a fluid which, according to exact investigations, contains red and colorless blood-corpuscles, as well as fibrin in a similar manner as blood. The improbability of such a secretion is materially supported by the clinical facts. Whoever has seen cases of so-called hæmathidrosis will recognize that in a number of such persons there exists a strong tendency to rhexis of the vessels, and that as a rule other abnormal hemorrhages occur on the mucous membranes and internal organs. Furthermore, it is established in nearly every case that physical or mental emotions preceded the attack, and that the latter is ushered in by local processes. Some neuralgia, hyperæsthesia, itching or other disturbance of sensibility is present at the point in question, or else, without any altered sensibility, there appears a local hyperæmia, a swelling, often even some discoloration of the surroundings; then an exudation, flow, or jet-like (2 mm. high, Hebra) stream of a bright red or, according to the admixture of serum, pale-red fluid issues from the pores. To be sure, all these factors do not altogether exclude the possibility that the sweat glands take an active part therein; still some suspicion as to the causal relationship must be roused by the fact that a like fluid often comes to the surface at the same time from the mucous membranes; that the process can frequently be excited by local mechanical influences; and that it is by no means permanently confined to one place, but appears now here, then there, usually where the skin is more delicate, *e. g.*, the ungual phalanx, face, flexor and inner surfaces of the extremities. Moreover, some authors believe that hæmathidrosis invariably appears only on places affected with furuncles or other inflammations, while we have seen above that these