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WHITE (J.C.)

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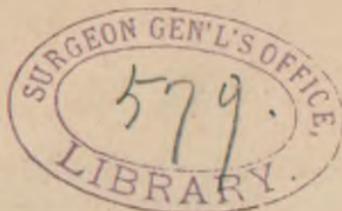
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THE PREVALENCE OF GERM DERMATOSES.¹

BY JAMES C. WHITE, M.D.,

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WHEN this Association was founded, scarcely twenty years ago, the number of individual affections of the skin known to be caused by vegetable parasites was very small, some three or four only — now the list of those, the origin of which has been positively determined to be of this nature, has increased to sixteen or more, and to these may be added six at least which are in all probability of a similar character. Reckoning the number of diseases of the skin, as recognized by this Society in its first published list, at one hundred, it appears that twenty or twenty-five per cent. of them are of vegetable parasitic origin. If in this category were also included all the forms of the more common dermatoses which have been in these latest days regarded by certain observers as of this nature, as eczema, psoriasis, seborrhea, pemphigus, etc., this proportion would be greatly magnified. Such claims will, however, be disregarded in this paper.

I have thought that it might be not wholly without interest to present to you a brief report upon the relative prevalence of this class of affections, as illustrated by my clinic at the Massachusetts General Hospital during our last official year, in which 3,581 new patients presented themselves for treatment. They represented several nationalities, twenty perhaps, and many classes of society, including the educated and well-to-do.

(1) Red sweat, one case.

This condition is scarcely entitled to be called a

¹ Read before the American Dermatological Association, September 19, 1895.

disease, although a cause of considerable annoyance rather from its visible effects upon the underclothing than the appearances it produces upon the hairs of the axillæ. This bacterium, *micrococcus prodigiosus*, has been said to grow more readily upon blond and red-haired persons. Perhaps more properly stated, it is more easily discovered upon light-colored hairs. Its presence may be regarded as a want of proper care of the axillæ. It could scarcely develop upon persons who wash these parts with soap and water daily, but as favoring conditions for its growth may be said to be the rule among dispensary classes and its occurrence is very infrequent, but a single case presenting itself during the year, the germs must be proportionately rare with us. This bacterium is capable of very rapid growth, for the underclothing may be stained over a considerable extent, several inches in circumference, on parts in the neighborhood of the axillæ after being worn but three or four days.

(2) Erysipelas, 35 cases.

The cases of erysipelas which find their way to the skin clinic are generally mild forms affecting the face, where the traumatic origin is not apparent. No doubt, however, that slight abrasions of the cuticle or inappreciable solutions of continuity which accompany inflammatory conditions of eyelids, nostrils, or ears, will account for the entrance of the *Fehleisen streptococcus*, and the frequent recurrent attacks of the affection in connection with such chronic disorders of the facial orifices. I have frequently put a stop to a long series of recurrences of erysipelas by making the patient give up the habit of continually picking the nose. Such results point to simple persistent or recurrent traumatism, and an omnipresent pervasion of germs as a sufficient explanation of recurrent erysipelas, and make the theory of a persistent and attenuated germ virus,

microbisme latent of the French, unnecessary. The grade of dermatitis in ordinary cases of this type rarely exceeds the erythematous stage, and the active phase of the parasite is brief, judged by the self-limited irritation it excites in any one area of the cutaneous tissues. Its vitality may be almost surely curtailed to a period of two or three days, and the extension of the inflammation checked within the same period, by the application of mild parasiticides. I have continued to obtain such uniformly successful control over it by the method already described before this Association, namely, the constant application of the following wash: carbolic acid, one drachm; alcohol and water, eight ounces of each. I have in several instances made a comparative test of its action and that of ichthyol, so much used for this purpose in some parts of Europe, by applying them simultaneously to different parts of an affected area, and have invariably found the ichthyol far less effective in controlling the extension and duration of the inflammation. I would again comment on the absence of all evidence of the contagiousness of such forms of erysipelas in the clinical history of my cases.

(3) Furunculosis, 59 cases.

The majority of cases of furunculosis occurred in the summer months among infants of the poorer classes as a sequel to heat-rash, eczema, and other forms of dermatitis induced by heated rooms, foul clothing, lack of cleanliness and proper food, most favorable conditions to the admission of staphylococci to the cutaneous follicles, and to their rapid culture and extension by auto-infection over large areas. In the other most frequent clinical variety the affection was limited to some one and quite restricted locality, as the neck or one limb, where infection is conveyed from one follicle to another in succession by the clothing or improper use of poultices or other dressings.

I feel assured that we may gain quite immediate control of every case of furunculosis, however favorable the soil for the development of the staphylococcus under the influence of certain accompanying conditions of the economy, by means of thorough asepsis of the cutaneous surface alone. This may be accomplished by proper washing of the affected areas with a solution of corrosive sublimate, one grain to one ounce, once or twice a day, and by keeping the same constantly covered with a cloth thickly spread with the following ointment: salicylic acid half a drachm, carbolated cosmoline one ounce.

(4) Carbunculus, no case.

(5) Pustula maligna, no case.

(6) Impetigo contagiosa, 91 cases; Ecthyma, 18 cases.

Other very frequent forms of the condition well described by the French school by the title "staphylococcia purulenta cutanea," are the superficial dermatitis we call impetigo contagiosa, and the deeper-seated inflammatory process, ecthyma. Although the lesions of each are distinctively typical, and the diseases are well defined in the main, yet we frequently meet with cases of extensive distribution where the two affections are intimately combined with each other and furunculosis, and in which it is impossible to state to which of them certain of the lesions should be ascribed. They are all caused by the presence of the pyogenic staphylococci, aureus and albus. Differences in the locality and the portion of the cutaneous tissues affected, in the age, temperament, and general condition of the patient will account in a measure, no doubt, for the diversity in the character of the lesions excited by the presence of these germs, but there must also be some as yet unrecognized specific quality in them by which the individuality of the respective affections is kept

true, so that impetigo contagiosa, for example, almost invariably reproduces its characteristic lesions upon any part of the surface of the same individual by auto-inoculation, or when transferred to another child of the same family or a playmate. Its association in children with pediculosis capitis is so frequent that I never fail to examine the hair in every case of impetigo contagiosa of the face or hands.

It scarcely needs mention that secondary forms of purulent processes, due to staphylococci, are constantly observed in the course of many other dermatoses, but we must yet recognize the occurrence of some forms of pustulation and suppurative processes of the skin in which such germs are not found.

(7) *Tinea trichophytina*, 96 cases.

Under this general title are included all cases of ringworm of the general surface and hairy parts. If we accept the conclusions of Sabouraud, with which you are acquainted, as put forth in his praiseworthy volume, "*Les Trichophyties Humaines*," recently published, they represent in all probability examples of three or more distinct affections, the individuality of which has been established by differences in the microscopic appearances of the parasite found in them, in its seat, its longevity, and the results of culture and inoculation. He recognizes three principal forms:

First, *trichophyton megalosporon* (endothrix), the ordinary benign form of the scalp and general surface in children mostly, in which the plant presents certain botanical varieties.

Second, *trichophyton megalosporon* (ectothrix), which is always of animal origin. Two well-marked clinical forms are recognized by Sabouraud: first, that derived from the horse, which is highly pyogenic, producing agminate and circinate perifollicular purulent dermatitis, and the cause of the so-called kerion Celsi, and

parasitic sycosis; and second, that contracted from the cat, characterized by its more superficial and vesicular lesions. The results from culture of these two forms are quite distinct.

Third, trichophyton microsporon, in which the parasite is not a true trichophyton, but is the small-spored microsporon Audouini. This is the most common form of the disease in children, the most contagious and rebellious, and the epidemics, which run through schools and asylums and last for many months or years, are said to be of this character. Its seat in the integument is superficial, however, and it causes no permanent baldness.

It would be of great interest if these brilliant studies of Sabouraud could be repeated by some competent worker amongst ourselves to determine if the results to be obtained from material here are identical with his.

A noteworthy variety of parasitic dermatitis which I have had frequent opportunity of observing in members of the "crews," "teams," and other athletes of the undergraduates of my university, affecting the circum-genital regions, and differing from ordinary forms of eczema marginatum and erythrasma of these parts, and which is probably spread amongst them by the careless interchange of clothing used in their sports and towels, deserves mention here, and a proper bacteriological study.

(8) *Tinea favosa*, 10 cases.

These cases were all of immigrant origin, in Polish-Russian Jews, or Italians. Favus is an extremely rare disease among the native New England population. Were it more contagious, the introduction of so many imported opportunities into our common schools would certainly make it more prevalent. A few instances of permanent alopecia, a sequel to favus, extinct in early life, were observed, as in other years, among the classes

above-mentioned. On the polymorphism of achorion Schoenleinii I have no comments to offer.

(9) *Tinea versicolor*, 31 cases.

They presented no noteworthy features.

(10) *Erythrasma*, one case.

But a single instance of this rare mycosis, caused by *microsporon minutissimum*, was observed, the first in several years. In my private practice it is of equally rare occurrence.

(11) *Tinea imbricata*, no case.

No case of Tokelau ringworm has ever been observed in Boston within my knowledge. It is interesting to note that Sabouraud regards its parasite as belonging to his class of trichophyton megalosporon.

(12) *Actinomycosis*, no case.

(13) *Mycetoma*, no case.

(14) *Tuberculosis cutis*, 22 cases.

Under this single title all clinical forms have been included, so-called lupus, scrofuloderma, verrucous and gummatous. In several instances two of them were associated, and in one patient all four coexisted. The probable history and source of infection in some of them was determined, one of which I have reported to you in detail at this meeting.² In one or more of them tuberculosis pulmonum also existed, but it is not generally possible to determine whether the bacilli affect primarily the lung or skin tissue. Whenever practicable, I am convinced that the complete removal of all forms of cutaneous tuberculosis by excision is the best method of cure. Every case of every kind should be regarded as a serious menace to the life of the patient and to every member of the household.

(15) *Lepra*, two cases.

One of the patients was a negro from the West Indies, the other was a Scandinavian girl. The latter

² An Etiological Puzzle, Boston Med. and Surg. Journal, December 5, 1895.

represented the second instance, which has occurred to me recently, of a difficult question, both in relation to diagnosis and one's duty to society. Consider two girls, recent immigrants from Norway, at service in families. Both of them present a chronic erythematous condition of the skin of considerable extent, and of no variable or ordinary type. It might well be a prodromal manifestation of leprosy, but there were no other indications of that disease present that could be detected. Had they not been Scandinavians, or were one not familiar with such possible early prodromal conditions, such a diagnosis would probably not have occurred to a physician. Yet I saw in Professor Bøeck's wards for lepers in Christiania last year two patients whose only symptoms were one or two erythematous areas of much smaller size. Possibly both my patients would have been at once recognized as unmistakable lepers by such an experienced observer. Now what was my duty? These girls were dependent upon themselves for support. Should I inform the families in which they were living of my suspicions, and cause their dismissal? In this case they would seek service and concealment in some other household, and thus pass out of professional observation. Should I report them to the Board of Health as lepers? I could not do this, for no such positive diagnosis was possible, and without it I do not see how they could have been sent back to their native country. We have no house of detention for observation, either State or National, unfortunately. The immediate condition of the girls was not dangerous to their associates certainly. An examination of the affected areas for bacilli was made in both cases, but the results were negative. It proved nothing. The sensibility of the skin was unchanged. I decided to withhold my suspicions, and to keep the cases under observation. I

was not forgetful of similar early indications of mycosis fungoides and sarcoma. One of the cases is beginning to exhibit a few suggestive tubercles within the erythematous areas.

I should be pleased to receive the counsel of my colleagues here as to my duty in these cases, to the patients, to the community, to the health authorities. They will recur to all of us.

Taken together, all the cases of these affections which are to be regarded as of positively parasitic nature number three hundred and sixty-six, or rather more than 10 per cent. of all the new cases presenting themselves for treatment at the clinic throughout the year.

In the second category, affections which are probably caused by a vegetable parasite, the evidence of which is, however, not yet positively established, may be classed the syphilodermata, *ulcus molle*, some forms of alopecia areata, purpura and mycosis fungoides, of all of which instances in great or small number occurred during the year, the total exceeding those of the first class.

It will be observed then that perhaps 25 per cent. of all cases of skin disease occurring in dispensary practice are probably caused by vegetable parasites, and are, therefore, preventable affections. If to these were added all those produced by animal parasites, this proportion would be greatly magnified.

It seems to me that the importance of these facts should be recognized not only by professional boards of public health and school committees, but that some knowledge of them and of the proper precautions against contagion should be disseminated among the people at large. And what a change have these discoveries brought with them in the making of the ac-

complished dermatologist, in the teaching of our specialty. Now, much more is necessary than the merely clinical knowledge with some smattering of pathological histology, such as satisfied us older members of this Association in our student days. Then, the size of the clinic, the readiness of the diagnostician, the skill of the practitioner, were the main qualities of the most celebrated schools of dermatology. Now, they are but a part only. The demands of the laboratory have become as great or greater than those of the clinic upon the time of the student in our department in the best schools of Europe. He must become thoroughly grounded in the pathological anatomy of cutaneous diseases, and I need not allude here to the diversity of morbid processes to which the skin is subject. It knows them all. Nor is it longer possible to acquire such knowledge at the best under the teachers of general pathology. Fortunately there are those whose special acquaintance with the changes of the cutaneous tissues under disease has made their competency to teach them world-known. The requirements in such a groundwork of dermatological study are well-nigh inexhaustible. One of our most accomplished European colleagues, whose contributions to this department of our specialty have been of great value, pointed to a seat in his private laboratory and said recently to a young student of dermatology, "There is your place for the next two years."

But the bacteriological laboratory makes also a great and necessary demand upon his time, if a requisite knowledge of technique is to be acquired. Its application in this all-important field of inquiry in cutaneous pathology cannot be over-estimated, and we may well believe that the results of such studies are to be as brilliant for the progress of the therapeutics of dermatology as they have already been in etiology.

It is evident that no school of dermatology can remain great that relies upon its past clinical reputation and neglects the teaching of these most essential laboratory departments. Fortunately there is one school where all these branches may be studied in a complete way, and where general dermatology is taught in a broad and liberal spirit by eminent masters with unequalled clinical facilities and a magnificent museum of models. That constitutes a great school. Such is Paris to-day, and there are other places where excellent laboratory instruction may also be obtained, by no means so well known to the student as they deserve to be, as Prag, Breslau, Lille and Bonn. Let us try to make it not impossible before long to add some American schools to the list.

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