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HOWARD FOX, M.D.
NEW YORK

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The cutaneous manifestations of pellagra have been so accurately and fully described in the recently published monograph of Prof. Ludwig Merk (Die Hauterscheinungen der Pellagra, 1909) that it would be difficult to add anything new to what has already been said. My excuses for recording some personal observations made during a recent trip to the South are that pellagra is a comparatively new disease in the United States, and that the literature in our country is as yet rather meagre. The medical literature of Europe, and especially that of Italy, upon the subject of pellagra is indeed enormous. I know, however, of only two communications dealing solely with the cutaneous aspect of pellagra (the one by Dr. Bernard Wolff of Atlanta, Ga., the other by Dr. Isadore Dyer of New Orleans) that have as yet appeared in the United States.

At the recent national conference on pellagra I had the opportunity, through the kindness of Dr. J. W. Babcock, of studying about forty cases of pellagra at the State Hospital for the Insane. At the symposium on pellagra held a week later by the Southern Medical Association at New Orleans, a further opportunity was offered of studying a half-dozen cases. A few additional cases were also kindly shown me by Dr. Bernard Wolff at Atlanta and by Dr. Robert T. Wilson, Jr., at Charleston.

As the skin lesions of pellagra are most marked in

the spring and early summer, it was inevitable that some of the cases, especially the milder ones, did not present as typical lesions as could have been desired. A few of the cases, indeed, showed no skin lesions whatever. While the number of cases was not great, it was sufficient to convince me that the cutaneous lesions observed were different from any I had ever seen in New York at the dermatological clinics or societies with which I am connected. While I have never seen any cases abroad, there is no doubt that the disease seen in the South was pellagra from the almost exact similarity of the lesions to the descriptions of certain European writers.

Dr. J. J. Watson, in a paper recently read before the New York Academy of Medicine, stated that in his opinion the "characteristics of the eruption were its symmetry and color." I agree with Dr. Watson that the symmetrical distribution of the lesions is most characteristic and striking, but do not consider that the color is as characteristic. It is true that many of the cases seen by me were in negroes, in which the question of color played no part. The eruption seen in the white persons presented a bright red color, changing to a dull red, and later to a yellowish brown. No one color, it seems to me, could be said to be absolutely characteristic of pellagra, as is the violaceous color of lichen planus, the yellow of xanthoma, or even the lean-ham color of specific lesions.

A characteristic feature of the skin lesions fully as important as the symmetry is the sharply circumscribed border seen most frequently in the patches upon the neck and hands. Indeed, the lesions upon the neck, forming the so-called "neck-band" of Casal, are absolutely distinctive, and could not well be confused with any other lesions of the skin. Several illustrations of the neck-band are to be seen in Merk's book which are almost perfect counterparts

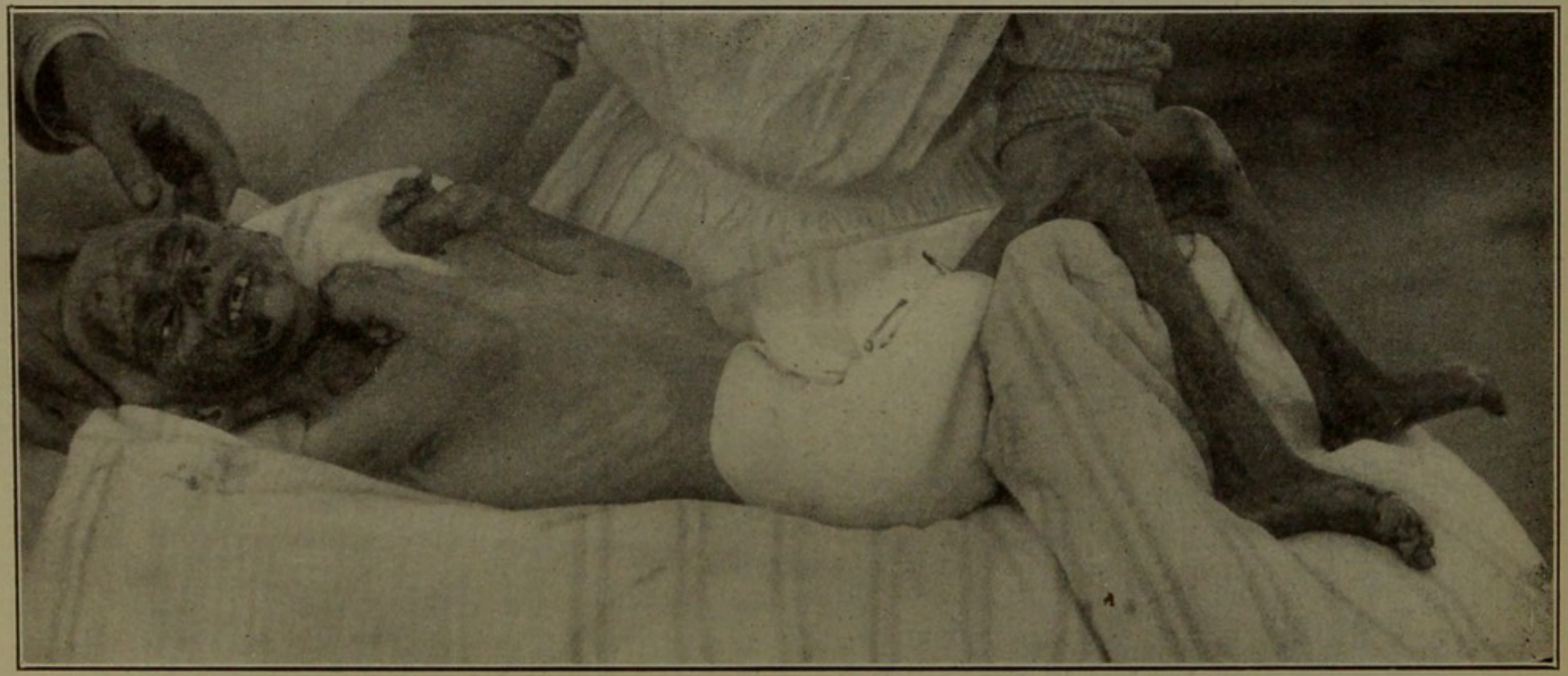
of some cases seen in the South. None of the cases presented sternal prolongation of the neck-band, the so-called "appendix fasciolæ" of Casal. Most of the cases were, however, in women, and Merk states that he has not met with this lesion in the female sex.

A striking picture was also presented by the eruption on the backs of the hands and wrists when the characteristic border was present. In many cases this border was seen not only upon the back, but also upon the front of the wrists. In the cases in which the eruption was disappearing the sharp border was no longer visible.

Comparatively few of the cases showed lesions upon the face. In one case there were lesions upon the neck and cheeks which at first glance looked much like a burn that might have been produced by carbolic acid. Some of the cases presented lesions upon the dorsal surfaces of the feet. In others the lesions involved the greater part of the legs and resembled an eczema. Few of the lesions noted upon the feet presented a sharply marked border.

While the backs of the hands, the wrists, neck and dorsal surfaces of the feet are the usual sites for the eruption, it may also be seen at times upon other locations. In the case of Dr. Watson, above quoted, typical sharply bordered patches were seen upon both elbows and knees. They might have been mistaken for psoriasis if the characteristic scaling of that disease had been present. At the symposium in New Orleans, Dr. C. C. Bass of that city demonstrated lantern slides showing the eruption upon the breast in one case and upon the foreskin in another case, in addition to lesions upon the typical locations.

Few of the eruptions which I saw were complicated by pustulation, constituting the so-called "wet cases." Fissuring, especially over the knuckles,



Advanced case of pellagra, showing extensive eruption. Patient died four months after onset of disease. (Case of Dr. C. C. Bass, New Orleans).

was quite frequently noted. Telangiectases described by Lombroso were not marked in any of the cases. My attention was called by Dr. Babcock to patches of ecchymosis occurring upon both the upper and lower eyelids in crescentic patches. Had they not been entirely symmetrical they might readily have been mistaken for traumata. In full-blooded negroes the change in the color of the skin consisted simply in a jet black pigmentation, looking, as Dr. Watson described it, as if the hands had been smeared with soot. It was, unfortunately, not possible to watch the evolution of the eruption in any case through the stages of erythema, desquamation, and pigmentation, and the later resulting atrophy. An idea of the evolution of the eruption could be obtained only by observing the different stages in different patients.

In the differential diagnosis of the skin lesions of pellagra it is necessary, according to Merk, to consider only four affections, namely, sunburn, vitiligo, eczema, and erythema multiforme. The eruption of pellagra is at first frequently mistaken for solar erythema. An ordinary sunburn, however, is never followed by the marked and persistent scaling of the pellagrous eruption. The entire absence of scaling in vitiligo would at once differentiate this condition from pellagra. There are certain forms of eczema which at first might be taken for pellagra. In a case of squamous eczema the backs of the hands, in which the lesions were sharply circumscribed and symmetrical, the similarity to pellagra might at first seem quite marked. The characteristic itching of eczema as contrasted with the almost entire absence of subjective symptoms in pellagra would generally render the diagnosis clear. Bernard Wolff, in recording some observations on the skin lesions of pellagra from a study of seventeen cases (*American Journal of Dermatology*, 1909,

p. 343), writes: "In the severe forms of dermatitis (pellagrous) the resemblance to an acute erythematous eczema was fairly close." The possibility of confusing erythema exudativum multiforme is discussed at some length by Merk. It does not seem as if there should be great difficulty in differ-

Case of pellagra, showing eruption upon front of right wrist and back of left hand. Palm not affected. (Case of Dr. C. C. Bass, New Orleans).

entiating these conditions, as there is no scaling, as a rule, in erythema multiforme.

In no case did I happen to see the interesting condition described by Isadore Dyer in a recent communication (*New York Medical Journal*, 1909, p. 997). In case No. 3 of his series the eruption upon the dorsal surfaces of the hands was "particularly

associated with the orifices of the hair follicles," and closely resembled a pityriasis rubra pilaris. In one case at Columbia, in a full-blooded negress, an eruption was seen upon the face which I would certainly have called lupus erythematosus if the patient had not given a history of rapid appearance and disappearance of the lesions, together with other typical pellagrous symptoms.

The name erythema, by which the eruption of pellagra is generally denoted, does not appear to me to be entirely appropriate. It would seem quite proper to use the term erythema for the first stage of the disease, which resembles an ordinary sunburn and which lasts only a few days. But it seems somewhat anomalous to speak of the entire eruption as an erythema when the erythematous stage is so comparatively insignificant, while the stage of disquamation is so characteristic and of such long duration. An eruption which is called an erythema conveys the idea of affections such as erythema multiforme or the so-called toxic erythemata, which are not as a rule accompanied by disquamation. The general term of dermatitis would be a more appropriate name, in my opinion, than erythema for the pellagrous eruption.

It has long been a more or less generally accepted idea that the eruption of pellagra was caused by the action of the sun's rays upon the exposed portions of the skin. This theory, maintained by older writers such as Strambio and Frappoli, is still held by many at present, notably such authorities as Babes and Sion. That the action of the sun's rays is not the sole cause at least of the eruption would appear from the arguments of Raymond, quoted by Merk, who says that the eruption may occur on parts of the body protected by the clothing, or even in persons who remain indoors and are not at all exposed to the sun. It may reappear upon the same regions

in persons who have taken precautions to protect the skin from the sun. The eruption may not be equal in extent to the area of the skin exposed. Finally, it may occur (quoting Neusser) in naked children upon the characteristic locations, although their entire bodies were exposed to the action of the sun's rays.

Reasoning from the observed fact that the eruption can appear on covered parts of the body, Nicolas and Jambon (*Lyon Médical,* 1908, p. 724) conclude that if the sun's rays are one cause of the eruption, they at least play a rôle of little importance. A very interesting lantern slide was shown by Dr. Bass at New Orleans, which would appear to prove that in this case the eruption resulted from exposure to the sun. The photograph showed the eruption upon the backs of the hands of an undoubted pellagrin. The patient had worn two rings, one of which had at times been removed, while the other had remained upon the hand up to the time of taking the photograph. Where the first ring had been worn was seen a circular band a little lighter in color than the surrounding darkened skin, while on the finger where the second ring had been worn was seen a band of normal white skin, contrasting very strongly with the surrounding skin.

The cutaneous manifestations of pellagra represent in themselves a rather harmless and unimportant symptom of the disease. They are, however, of great importance from the diagnostic standpoint. To make a diagnosis of pellagra without skin lesions the so-called "pellagra sine pellagra" would seem difficult or impossible. Merk has well said that in pellagra the cutaneous lesions are of the same importance as are the eruptions of variola, measles, and other exanthemata in the diagnosis of these diseases.

616 Madison Avenue.