

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXVI.

THURSDAY, FEBRUARY 20, 1862.

No. 3.

PITYRIASIS VERSICOLOR.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal, by JAMES C. WHITE, M.D.]

CASE I.—In the summer of 1858, Mr. R., æt. 35, clerk in one of our first-class hotels, consulted me in regard to a cutaneous affection upon his person. It was first noticed, more than two years previously, as a small brownish patch upon the skin of the throat, just under the shirtband, from which it gradually spread to the chest, shoulders and upper part of the back. The disease did not uniformly affect the whole surface in the regions referred to, but formed discolorations of irregular outline, bounded by perfectly healthy skin. A few months before I saw him the disease had extended to the abdomen, thighs and penis. It had produced great itching from its first appearance, and as the area of the surface of skin affected increased in size, this symptom became almost intolerable, causing the patient intense suffering during the hot season of the year, and when warmly covered in bed. The aggravation of the affection in summer was strongly contrasted with its marked decrease during each winter since it had made its appearance. With the exception of a somewhat disordered nervous system, readily explained by the constant irritation of its cutaneous filaments, Mr. S. enjoyed good health. He had been under the care of several physicians in this city, and had also consulted an eminent professional gentleman in New York, all of whom had called his disease *chloasma*, and had prescribed accordingly the internal use of mercury in various forms, and other drugs directed to the liver. It is needless to say that the disease progressed, notwithstanding, up to the date above mentioned, when, becoming much aggravated by the heat of the season, it induced him to consult Dr. Bowditch, who sent him to me.

At this time, the skin of the chest, shoulders, abdomen, back, thighs and penis was mottled with irregularly shaped, confluent and isolated patches of a light brown tint, slightly raised above the general surface, and varying in size from a pin's head to that of an extended hand. Crossing these were long parallel lines of excoriations

VOL. LXVI.—No. 3

produced by the nails, just as in scabies and other diseases attended by great itching. The healthy portions of the skin between the patches and bordering upon the disease were of a darker color than those parts of the body never affected, the result of a slight deposition of pigment—a phenomenon always following prolonged or reiterated hyperæmia of the skin, whether artificially or naturally produced. The epidermis could be easily removed from above the elevated patches of the disease, and quite large quantities of the same were often ploughed up in furrows by the nails of the patient. The epidermal cells thus obtained appeared much lighter colored than the soil upon which they grew, and by microscopic examination were found to be filled with the spores and mycelium of the parasitic fungus called *microsporon furfur*, which is characteristic of this disease.

The patient was directed to take a warm bath at night, and while in it to rub the affected parts thoroughly with a piece of coarse flannel cloth smeared with "schmier seife," or German soap, with the formula of which you are familiar. This process was to be repeated every night, and in addition to it the soap was to be applied in the morning also, and to be washed off with cold water. This was followed at first by excessive desquamation from the surface of the diseased skin, and by marked diminution of the itching. At the end of a fortnight, all traces of the affection had disappeared, and the skin of the affected parts, saving a slightly darker tint, dependent upon previous hyperæmia already explained, was not to be distinguished from that covering other portions of the body. During the period of more than three years which have now elapsed, there has been no re-appearance of the disease.

CASE II.—During the hot season of 1859, I was consulted by a German, a waiter in an eating house, 19 years old, on account of a disease of the skin, which had troubled him for more than a year. It had first shown itself about the neck, and had rapidly spread to the front of the chest, producing a brownish discoloration of the skin and itching intensely, especially when perspiring and during the night. He was a strong, stout fellow, and, except this torment, was in perfect health. He had never used any remedies, external or internal, and seldom if ever washed himself. According to his statement, his sister, a servant girl, living in Beacon Street, was affected in a similar manner, and had become so subsequently to the appearance of the disease upon himself. The itching in her case was said to be as severe as in his own, and the parts affected the same.

On inspection, the whole front surface of the chest was more or less covered with elevated patches of irregular shape and a light brown or yellow color, from the surface of which the epidermis could be very easily scratched up. These cells exhibited, when examined by the microscope, fine specimens of the *microsporon furfur*. The use of *sapo viridis* was advised, as in the case above narrated, and complete recovery followed. The sister, unfortunately, I was unable to see.

CASE III.—December 11th, 1861, Mr. B. presented himself at the Dispensary in Eliot Street, for advice. He was a respectable carpenter, aged 44, and had been suffering from a troublesome cutaneous disease for more than ten years. Beginning about the neck, it had gradually increased in extent, and severity of itching, until nearly the whole surface of the abdomen, back, front chest and upper arms presented a dirty yellow appearance. The cuticle was thickened in these regions, and was often removed in large flakes by the use of the towel. The itching produced by the disease had for the last few years been intense, not unfrequently producing well-marked spasms. It was far more severe during the summer months, and was especially aggravated at night, and while perspiring at work. He had a wife and several children, but the disease had never been communicated to them. He had been under medical treatment a great portion of the time from the first appearance of the affection, but the remedies employed had been mostly internal, and had been of no avail in opposing its progress. There had been several periods, always in the winter season, when the disease had in great part disappeared, always to renew its vigor and torment, however, with the coming of spring.

When first seen, the skin of the parts thus distinguished was spotted and blotched, as if stained by tobacco-juice. These marks, elevated above the general surface to a degree easily noticeable by touch, though scarcely so to the eye, were in some parts isolated and irregularly circular in form, in others, perhaps contiguous, composed of large blotches of indefinite outline, formed evidently by the extended growth and confluence of the smaller and distinct patches. The epidermal cells taken from these parts were literally crammed with the growth of the *microsporon furfur*, as may be now seen by the microscope. The patient was told to use the German soap in the manner above directed, and returned on the 19th of the same month, saying that the itching had almost entirely disappeared, and that he had not felt so well for years. He was advised to continue its application, but dispensary hours being those in which he is most busily engaged, I have not seen him since, although I have no doubt that the disease is completely cured by this time.

Other cases of this disease seen during the past four years might be given for illustration, but the above are sufficient for my present purpose, which is to show how entirely alike and well marked the symptoms are in all cases from beginning to end, and how easily we may be led into false views of disease by following the teachings of any one man. Two of these patients had suffered long, and swallowed many drugs, both needlessly, because of the ignorance of one who is generally regarded in this country as unquestionable authority in diseases of the skin. I allude to the views expressed by Wilson in regard to this and similar parasitic diseases. He does, to be sure, think the question of the cryptogamous nature of favus and herpes tonsurans a matter of sufficient importance to devote many

pages to its consideration, and makes most absurd attempts at argument to satisfy himself and readers, that what looks like a plant, is pronounced by the ablest botanists to be a plant, and may be transplanted and made to grow as a plant, is in reality not a plant at all, but only transformed epidermal cells. In the disease we are at present considering, however, he alludes to its pretended parasitic nature simply to deny it, and to say that he has even failed to discover any evidence of the presence of the forms in question. He confounds the set of symptoms we have described with others under the head of *chloasma* (*maculæ hepaticæ*, or *leberfleck*), which is an entirely different disease, and has nothing whatever in common with *pityriasis versicolor*, except a faint resemblance in color. By thus mingling two distinct affections he commits a double wrong, for he not only deceives his reader as to the real nature of one set of symptoms he records, but he attaches to the other disease, *chloasma*, characteristics which by no means belong to it. The error into which he has fallen, and which is repeated by all English writers so far as I know, with the exception of T. McCall Anderson, a student of Prof. Hebra, can be most clearly explained by a comparative description of the more striking features of the two diseases.

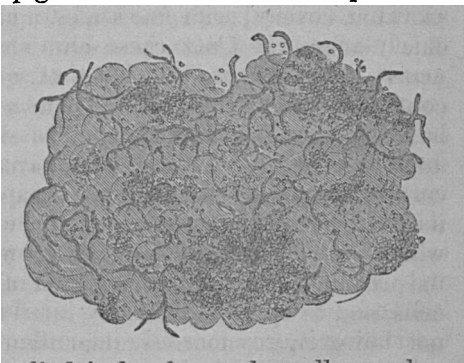
Pityriasis versicolor is characterized by the formation of yellow or buff-colored spots upon the surface of the skin, which are slightly elevated, covered with fine scales, and produce great itching. They chiefly affect the front chest and shoulders, but may extend over nearly the whole body. They vary in size from minute points to confluent, irregularly outlined patches of sufficient extent to cover half the chest or abdomen. The disease is seldom if ever seen upon such portions of the skin as are unprotected by clothing, as a certain degree of warmth and perhaps darkness seems essential to its growth. It seldom occurs on women, and never on children, which can only be explained by the peculiar tendency of the fungus to prey solely upon the hardened and outer layers of epidermal cells, and to spare the deeper-seated and more tender growth. It is not, however, any more singular than thousands of other freaks peculiar to these forms of vegetative life, and familiar to all acquainted with cryptogamic botany. When once, however, it has established itself upon the skin, it seldom dies out entirely, but spreads more or less rapidly, uninfluenced by any changes going on within the organism of its host, and quite as indifferent to any attempt upon its existence directed through that channel.

Now *chloasma* has an entirely different anatomical seat. It is a name properly applied to patches of the skin, which are discolored by an abnormal deposition of pigment in the *rete mucosum*, and which are not elevated above the surrounding skin. The epidermis which covers them is firm, and can be no more easily scratched up than that elsewhere, nor is it continually falling off in minute patches as in *pityriasis versicolor*. The provocation, moreover, to remove it is not felt as in the latter disease, for pigment alone produces no itch-

ing. The patches of chloasma, again, are isolated, and do not spread peripherally or with the rapidity which marks the growth of the parasite. They are, besides, sometimes congenital, occur in childhood, and more frequently on woman than on man, on all of which points they differ entirely from the disease under consideration. Indeed, Wilson himself is obliged to separate the symptoms he describes under the head of chloasma into two groups, on account of their mutual diversity, and his acute variety applies clearly to cases of true pityriasis versicolor which have fallen under his notice, and the true nature of which he has failed to detect.

The appearances of pityriasis versicolor are so well marked, that when once seen they will always be easily recognized, as easily in fact as a simple, untreated case of scabies; but should any doubt arise as to the real nature of the disease in any particular instance, we have only to remove a little of the easily detached epidermis, and the microscope decides the matter at once. It is necessary, however, to add some solvent of epidermal tissue to the material in the field, or else we may derive as little information from our examination as those who say they have never found the slightest evidence of the presence of a fungus. Let us therefore add a drop of a solution of potash to the epidermal matter taken from Case III., and we see how little like pigment or "transformed epithelial growth" it looks. We see

(Figure) lying between the upper layers of epidermal cells countless numbers of spores, and beneath these filaments of mycelium running in a net-work of endless intricacy. The spores are round, 0.006-7^m in diameter, possess a great refractive power, and seem to contain a kernel, looking much like a minute oil-globule. The filaments are cylindrical, of a pale yellow color,



branching, and are divided occasionally into cells.* When the patches are situated about the hair follicles, we find the parasite running deeply down into this opening, but like all others avoiding the sebaceous and sweat canals. We see, moreover, that the color, so characteristic of the disease, is imparted by, and wholly belongs to the microsporon furfur.

Ætiology.—As we have seen by the cases quoted, pityriasis versicolor may affect any class of persons, whatever their occupation or habits of cleanliness, although, strange to say, it seems to spare the female sex almost entirely, resembling in this particular none of the other parasitic plants which thrive upon the various tissues of the

* The diameter of the mycelium has been relatively exaggerated by the engraver.

human body. It might be suggested that sycosis is a similar instance of male predilection, but it will be remembered that the fungus which produces this disease is quite as often found in the female sex, on portions of the body affording an equivalent amount of nutriment in the form of herpes tonsurans, and that mentagra is but an extension of this latter affection to the more developed hair-follicles of the masculine beard. The origin of pityriasis versicolor is, at present, a matter of complete mystery. Whether it be a variety, merely, of some fungus by chance parasitic upon man, or whether the human epidermis be its proper and only soil, we do not know that its presence is the cause of a well-defined affection of the human skin. It is of frequent occurrence in Europe, and is quite as often met with here, if I may judge from my own experience. The species, as observed here, is botanically the same as that infesting the European, and, like the animal parasites of man, was undoubtedly brought to this country, originally, from the Old World. It is certainly communicable from one person to another, as has been proved by direct experiment, and as the spread of the disease from one portion of the body to another by its uninterrupted, onward growth, and the constant transplanting of the spores in the furrows ploughed up in the healthy epidermis by the nails of the sufferer, while scratching, sufficiently prove. Still it is not, by any means, so easily communicated to new hosts as the trycophyton tonsurans, nor is it often possible to trace any particular case to its source. We do not know but that sources of fresh contagion are, even now, being generated about us, similar to those which caused its first communication to man. Like most other fungi, it seems to thrive best in summer, and to be stimulated to instantaneous action by artificial heat. The color it imparts to the skin, as already stated, is its own, as much as the yellow of the favus crust belongs to the achorion schoenleini. Its growth is entirely independent of, and unconnected with the condition of the health of the individual it infests, nor does it exert any injurious effect upon the same, save the itching it occasions and its consequent results.

Treatment.—It is evident, therefore, that internal remedies exert the same influence upon the course of this disease as external applications would over the life of a tænia dwelling within the intestinal canal. It can only be cured by bringing in direct contact with the plant itself, such substances as are fatal to its vitality, and, to effect this, we must so remove the thickened epidermis as to allow such thorough penetration, that every spore or stray filament of mycelium may be reached. It is from neglect of this precaution that the use of blisters and strong washes of corrosive sublimate is only followed by temporary relief. The topmost branches, so to speak, have only been clipped, and the roots remain as firmly implanted as ever. In the use of the German soap, however, as employed in the cases above mentioned, we have a simple and sure remedy. It is a powerful solvent of the epidermal tissue, and thus

exposes the fungus to the farther action of the potash, which destroys it in turn with ease, and thus by the friction simultaneously employed, the diseased and effete matter is mechanically and gradually removed. A few applications are sufficient to check the itching, which is dependent upon the activity of the plant, but its use should be continued so long as any of the yellowish tinge remains.

PARALYSIS OF THE CILIARY MUSCLE AND CONSEQUENT LOSS OF THE ACCOMMODATING POWER OF THE EYE. RECOVERY.

[Read before the Boston Society for Medical Observation, December 16th, 1861, and communicated for the Boston Medical and Surgical Journal, by F. P. SPRAGUE, M.D.]

EVERY one is conscious of possessing the power of adapting the eye for different distances. Thus, an object may be seen equally well at a distance of several feet from the eye, or approached to within a few inches of it. This power, however, has its limits. If the object be carried too far, or approached too near, in either case it becomes indistinct, and in either case the eye is conscious of an effort, which becomes fatiguing and disagreeable if persisted in. The greatest distance at which the object can be distinctly seen is called by the Germans the "far point," and the shortest distance the "near point." The distance between these two points is called the range of accommodation, and the power itself the accommodating power.

Owing to the small diameter of the pupil, rays of light coming from a distant point form so small an angle with the central ray, proceeding from this point, that they are nearly parallel with it, and are considered practically though not mathematically as parallel rays. Rays of light may be considered parallel coming from a point at a distance of more than five feet from the eye. Rays coming, however, from a point within this distance, form an appreciable angle with the central ray, and are called diverging. The normal eye is adapted for parallel rays, so that they are brought to a focus upon the retina without effort, but when the rays are diverging, a change in the eye is necessary, in order to refract them more powerfully; otherwise the focus, instead of being formed upon the retina, would fall behind it, and indistinct vision result. What this change consists in, and how it is effected, has long been a matter of speculation, and within a few years much research and learning has been devoted to it.

It has been supposed by many, and this theory has still some able advocates, that, when viewing near objects, the eyeball is elongated by the pressure of the external muscles; thus the retina is pushed back to meet, as it were, the focus, which in the unaltered shape of the eye would fall behind it. According to this view, the lens is not perceptibly affected in shape or position, the ciliary muscle opposing itself to the action of the external muscles anteriorly, and thus the