

ON LEUCODERM, VITILIGO, VEN KUTTAM (TAMIL),  
OR CABBARE (SINGHALESE), AND SEVERAL  
NEW METHODS OF TREATMENT.<sup>1</sup>

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THE appearance of the unfortunate victims of vitiligo is striking, and scarcely fails to evoke a feeling of horror and pity for the afflicted, whose condition is deemed incurable. The picture of an otherwise dark person, perhaps a shade removed from the typical sooty hue of the negro's skin, marked with spots perfectly white, and, from the contrast, appearing fairer than the skin of the fairest European, must, to even eyes familiarised to the sight, appear repugnant. These spots vary from a mere speck to several inches in size, and, in advanced cases, the body being nearly all colourless. To the best of my recollection, they first appear about the lips, nose, eyelids, soles, palms, and forehead, or perhaps the conspicuous situation challenges attention first. Gradually they enlarge peripherally, and by the coalescence of several smaller ones. In the instance of a beggar, this, or a similar change, had progressed to such an extent that the appearance he presented was that of one in whom the conditions were reversed, namely, of a white man undergoing melasmatic transformation. To be strictly accurate, it must be stated that this unfortunate patient had the appearance of the leprous physiognomy, while the other cases I am adducing presented quite a healthy skin, but for the characteristic absence of pigment. In a young lady of my acquaintance (between the ages of 20 and 25) the visible parts of the body had become so perfectly leucodermic that one could scarcely say whether he had before him an individual of a fair skinned race or not. In a third, that of a gentleman, there was a large colourless area, implicating the greater part of the nose, cheek, lips, and part of the brow. On the dorsal and palmar surfaces of the hand, I noticed smaller but similar patches.

The decolourised part assumes an oval or roundish appearance; is not raised above the level of the healthy skin; in short, differs in no way from it except in colour. It is distinctly circumscribed, so that it is quite an easy matter to see where the white skin ends and the dark begins. These areas are not confined to one side of the body, but freely spread beyond the mesial line. To the best of my knowledge, there seemed no disturbance of the vascularity of the part, for I noticed, especially about the lips, distinct indications of blood-supply; in fact, from the greater transparency, the mucous membrane was rosier even than in health. The sweat-glands were also unaffected, for I noticed these parts bedewed with perspiration. The sensation of the part is probably intact.

*Age.*—This disease cannot be assigned to any special period of life, but I have seen examples oftener in adults than in childhood. When it manifests itself early in life, it does not seem in any way to affect the general health. Several children, thus afflicted, have been seen to grow up to manhood otherwise healthy. As the child grows, the spots also enlarge, but their growth is subject to great variation; for, in some, the blanching is rapid, while, in others, indolent. In a patient in whom the disease manifested itself early, the vitiligo was confined to her lips and heels, while the hands were speckled over with spots varying from a pea to a florin-piece and larger; and this, even after she had attained to middle age. But, though thus comparatively stationary in her, the disease spread with marked rapidity in her daughter, the young lady alluded to before.

*Sex.*—Either sex may be liable to this disease, but my impressions are that it is commoner in females.

*Diathesis.*—No special diathesis nor mode of life seems to predispose to the disease; but heredity appears to act as a strong factor in its production. Like other diseases of this kind, it may follow the law of atavism, passing over one generation to reappear in the next. Collateral branches may also show evidence of this disease. Though heredity plays an important factor in its occurrence, the disease is liable to appear in those also who have no such history.

*Distribution.*—Though India, Ceylon, Africa, Egypt, and probably many other parts of the world inhabited by dark skinned races would furnish the most striking instances, yet I believe that this condition is to be met with nearer home. The blanched white appear-

ance occasionally encountered on the face, and other parts of Europeans, is probably of the same nature, but it fails to attract attention from the absence of the contrast furnished by the dark skin around.

*Pathology.*—The question of pathology opens up a wide field for discussion. Until we are in a position to settle definitely why the cells of the rete Malpighii should, in certain races, have the function of manufacturing or attracting melanin, and why not in others—why, under certain circumstances and influences, we find pigmentation occurring in and disappearing from the body—until we settle these vexed points, we must cloak our ignorance by attributing these phenomena to some obscure nerve-action. The classical experiments of Lister on the pigment-cells of the frog, establish beyond a doubt the intimate relationship existing between these elements and innervation, and they give some semblance of truth to the otherwise mere suggestion that pigmentation is due to nerve-influence. But another factor, besides that of nerve-influence, should be taken into consideration, namely, the quality and quantity of the mother-pigment from which other pigments are derived.

The weight of opinion inclines strongly in favour of the hæmoglobin of the blood being the source of almost all pigments found in the body; other facts were wanting, I might adduce, as tending towards the corroboration of such derivation, the results I obtained in watching the changes which mammalian and amphibian blood underwent in its passage through the alimentary canal of the leech.<sup>2</sup> But what subtle changes in the circulating fluid and the circulatory mechanism may have taken place in vitiligo I am unable to state, beyond what has been mentioned above on this head.

It must be confessed that this, being a record of the impressions and observations of an anteprofessional period, these and other essentials, it must be evident, could not then have formed the subject of a close and scientific investigation, and also because contact with them was generally avoided. This caution arose from the disease in question being regarded as a phase of that loathsome affection, leprosy. It is no wonder that these two diseases should have been confounded by the lay public, for we find even the profession led astray. The chief factor in originating this mistake is the occurrence of pigmentless spots in both diseases; but, actually, the one is as distinct from the other as two diseases can be. For aught we know, this common symptom may be quite an accident in the case of leprosy; for many typical cases of lepra Arabum occur without the appearance of the white spots known as morphœa alba, while in vitiligo, the occurrence of this symptom is indispensable to constitute vitiligo.

*Diagnosis.*—Nothing can be more perfect than the graphic account given by Sir Erasmus Wilson, in his *Lectures on Dermatology*, which picks out at once the leprous from the non-specific disease, and to which the reader is referred. Further, as aids to diagnose the vitiliginous from the leprous transformation, I extract the following from Hebra as being very apposite. "In vitiligo, there are only white and brown patches. The white ones are sharply defined, disc-shaped, and always have convex borders, etc. . . . In other respects, the skin is normal in character, smooth, pliant, and of normal sensibility. The patches of vitiligo are surrounded on all sides by brown ones, the contours of which are consequently concave. . . . The spots in lepra present various shades of colour, they are more permanent, and for the most part not sharply defined. At the same time the skin has undergone other pathological changes, it is infiltrated or atrophic, hyperæsthetic or anæsthetic. The last mentioned circumstances also help to distinguish isolated sharply defined morphœa-spots from those of vitiligo. The hairs upon the white spots of lepra seldom become grey, and hardly ever uniformly so." (Hebra, *On Diseases of the Skin*, vol. iv, New Sydenham Society.) How far the reverse of this last character, which is said to obtain in leucopathia, may be recognised as of diagnostic value, I shall presently discuss.

It was here that I looked into the literature of the subject, more especially into Hebra; and, while in the main the slight account I have furnished corresponds more or less with the full and lucid views enunciated therein, I venture, with all deference to that eminent and distinguished dermatologist, to take exception to certain of his observations. He writes: "The pubic hairs and the hairs of the scalp are quite white, in isolated tufts and curls, *Poliosis circumscripta* (Fuchs), while the surrounding hairs, for instance, are of a normally dark colour. If we separate the white hairs from one another, we then discover that the portion of skin corresponding to the group of the latter is white over a patch of a circular form—is without pig-

<sup>1</sup> To Professor Struthers' able criticism of the text I am indebted; and were I to pass without a word of mention, I should be guilty of ingratitude for a kindly service which, I am quite satisfied, has naturally enhanced, in my estimation, what little value this contribution may have.

<sup>2</sup> See *Journal of Anatomy and Physiology* for April 1882, On the Digestion of Blood by the Common Leech, and on the Formation of Hæmoglobin Crystals. By William Stirling, M.D., Sc.D., Professor of the Institutes of Medicine, and Philip S. Brito, Student of Medicine, in the University of Aberdeen.

ment." From what has been said once before, the condition of the public hairs must be left uncontested; but, if my own vivid and lasting impressions be of any weight, I must say that, in one instance at all events, I was struck rather by the absence of this whitening of the hairs over visible parts than by the opposite contingency. In the instance of the young lady, the hair of the scalp was jet black. Here, once more, I must claim the reservation I have already made: but my impressions in regard to her are too strong to let them pass without a word of dissent. Dr. Hebra, writes further on: "It would seem that the disease commences in middle life only. We have never seen it in children." A footnote, appended evidently by the editor, would seem to contradict this statement, and I have on several occasions seen the condition developed in children as well.

*Treatment.*—"We are not able to cure vitiligo by any of the remedies or methods of treatment which are at present at our disposal. We can neither prevent the production of fresh pigmentless patches, nor arrest the progress of those already formed, nor permanently reproduce the normal pigmentation of the skin artificially on the whitened parts." Thus commences Hebra the section on Therapeutics. The only mode of treatment he offers seems apparently to apply to those cases of vitiligo appearing in "pigment-mole (nevus), or brown, flat acquired wart." His object is to deprive the rest of the pigment, and thus to away with the piebald disfigurement. For this purpose, he employs certain escharotics, "which cause a rapid removal of the epidermis." He cautions against the use of cantharides, cortex meseri, croton-oil, mustard-seed, and sulphuric acid, "whose application, experience teaches us, is followed by the production of fresh epidermis, which also appears of a dark colour." It is evident that his treatment is inapplicable to the vitiligo developing in dark races. We must, therefore, resort to some other means. In the face of the quotation with which I began this paragraph, and of the unlimited experience of Hebra, the greatest dermatologist any age has yet seen, it would seem hopeless to advocate any method of treatment as likely to be effectual in arresting the abnormality. But I will, nevertheless, indicate certain means which seem, theoretically, plausible enough, though one would not be surprised if the employment of some of them resulted in failure.

1. Why not use those very remedies for the destruction of white patches whose application Hebra thinks would result in producing epidermis of a dark colour? In this group, we should, *par excellence*, include silver-nitrate. Should the employment of these caustics result in the renewal of an epithelium without pigment, the following may be given a trial.

2. Excision of the patch when small and conveniently situated, the incision extending a good way into the sound black skin. Allow the parts to granulate, and perhaps the new epithelium, which is formed from the neighbouring healthy cells, may take on a healthy action.

3. Excision succeeded by grafting skin from the same or a different individual. Dr. M——, of Bengal, a graduate of the Aberdeen school, mentioned to me the instance of a European lady, who grafted a piece of skin of an Indian gentleman on to her neck, and that the graft took, retaining its original hue. Readers of Mr. Bryant's excellent work on *Surgery* will be reminded of a companion story. But what is more to the purpose is the fact, settled beyond a doubt by that eminent surgeon, that the grafts give their type to all the cells developed from them. Let me quote his conclusive remarks: "That the engrafted portions grow by the proliferation of their own cells is likewise proved by the fact that, in the case of a white man, upon whose ulcerated leg I engrafted four small pieces of black skin, the whole being no larger than a barley-corn, the black skin grew twenty-fold in ten weeks..... gradually enlarging, and sending out prolongations, which joined till one patch of black skin had formed." (*Practice of Surgery*, third edition, vol. i, p. 164.)

4. Dermic injections of solutions of silver-nitrate, and subsequent exposure to sun-light.

5. Inunction with a paste containing silver-salts, and tattooing with similar preparations.

6. Lastly, I would lay some stress upon the long continued internal administration of argentic salts, till the condition, known as argyria is induced. For this purpose, the nitrate is preferable to the oxide, which latter is less apt to induce staining. A course, extending over three months, ought, on theoretical considerations, to have the effect of rendering the leucodermic areas darker. I am aware this artificial pigmentation will not correspond to the natural hue of the normal pigment; but, judging from the feelings of the patients themselves, any sort of pigmentation, I should suppose, would be preferable to the ghastly whiteness.

It may be said that, as the salt is uniformly deposited in the skin, any darkening power it may have on the white patches will be compen-

sated by the additional darker hue induced in the surrounding skin. A little consideration of the physical effects of light upon a sensitive surface will meet this objection. When the photographer wants to protect any part of his prepared silver-paper from the darkening action of light, he employs a blackened medium to absorb the rays of light, and prevent their penetration. The pigment in the neighbourhood will fulfil this function of the screen, while the perfectly colourless vitiliginous spots will allow the free entrance of the solar rays, which could hardly fail to act on any silver present. Further, we may protect the surrounding pigmented regions, and expose only the diseased parts, aiding additional deposition, if need be, by some of the other methods detailed above. Again, the use of baths, which have for their object the removal of the deposited silver, carefully protecting the blanched areas byunctuous or other applications, may be resorted to under immediate medical supervision. If cyanide of potassium be thought too dangerous a remedy, the thiosulphate (formerly called hyposulphite) of sodium may be tried with safety.

The use of argentic nitrate recommends itself from another consideration. From the disease sometimes manifesting itself in corresponding parts, as the hands, or feet, not being confined to one side; and, further, from the experiments of Lister, quoted before, and from other considerations, we were driven to assign a neurotic origin to it. This drug has of late been largely and beneficially used in several such affections, and may be also beneficial in this instance, too.

Apart from this, if the cells of the rete Malpighii, which, according to Hebra, appear normal, the only difference being the absence of pigment from them, are concerned in excreting the salt, it is probable, I say probable—that, in doing so, they may be stimulated to regain their former legitimate physiological function. In this connection, let me remark that it has not been recognised as a fact of therapeutic value, or, if it has been, not with sufficient importance, that, in order to expect a drug to be effectual in removing a morbid condition from a tissue, it must be of such a nature that it should act on, modify, or be excreted by, that tissue in which the disease is situated.

When these measures first suggested themselves, I was in hopes that a practical experience would have supplemented their theoretical advocacy; but, as I am debarred, at present, from testing their utility, by the absence of suitable cases, I curtail publicity with the hope that some investigator, whose results will be gratefully waited for, will work out the details.

## CLINICAL MEMORANDA.

### REPORT OF EIGHT CASES OF DIPHTHERIA.

It may be of interest if I report the results, with the treatment, of eight cases of diphtheria, which came under my care during a recent epidemic.

CASE I.—A child, 2½ years old, when first seen, had membrane on both tonsils. The throat was painted with glycerine of carbolic acid, while perchloride of iron was given internally. The following day, there was membrane in the trachea; and, as the parents refused to allow tracheotomy, an emetic was given, causing the expulsion of a large plug. The patient, however, sank during the night.

CASE II.—A child, 12 months old, was seen for the first time during the night. It then had a small patch on the right tonsil, which was painted with equal parts of strong hydrochloric acid and glycerine, perchloride of iron being given internally. The patient only lived till the following morning.

CASE III.—A child, aged 2 years and 7 months, was moribund when seen, dying a few minutes after my arrival.

CASE IV.—A child, 12 months old, was seen with membrane on the back of the pharynx. Perchloride of iron was given, and the throat swabbed frequently with syrup of chloral-hydrate. The following day, the glottis was involved, but the parents refused to have tracheotomy performed, and the child died the same day.

CASE V.—A child, aged 1 year and 4 months, seen first with membrane on the pharynx and tonsils, was ordered sulpho-carbolate of soda with some aromatic ammonia in alternate doses with perchloride of iron. The throat was frequently swabbed with syrup of chloral-hydrate. The patient apparently recovered, but died suddenly on the ninth day after disappearance of all symptoms.

CASES VI, aged 5 years; VII, aged 3 years; and VIII, aged 6 years, were treated in exactly the same way as Case V; all recovered.

REMARKS.—Analysing the above cases, we have four deaths due to the direct effects of the poison; one due to a sequela, namely, paralysis of the heart. These were all under 3 years of age. The remaining