The etiology, pathology, and treatment of baldness & greyness / by Tom Robinson.

ON BALDNESS AND GREYNESS

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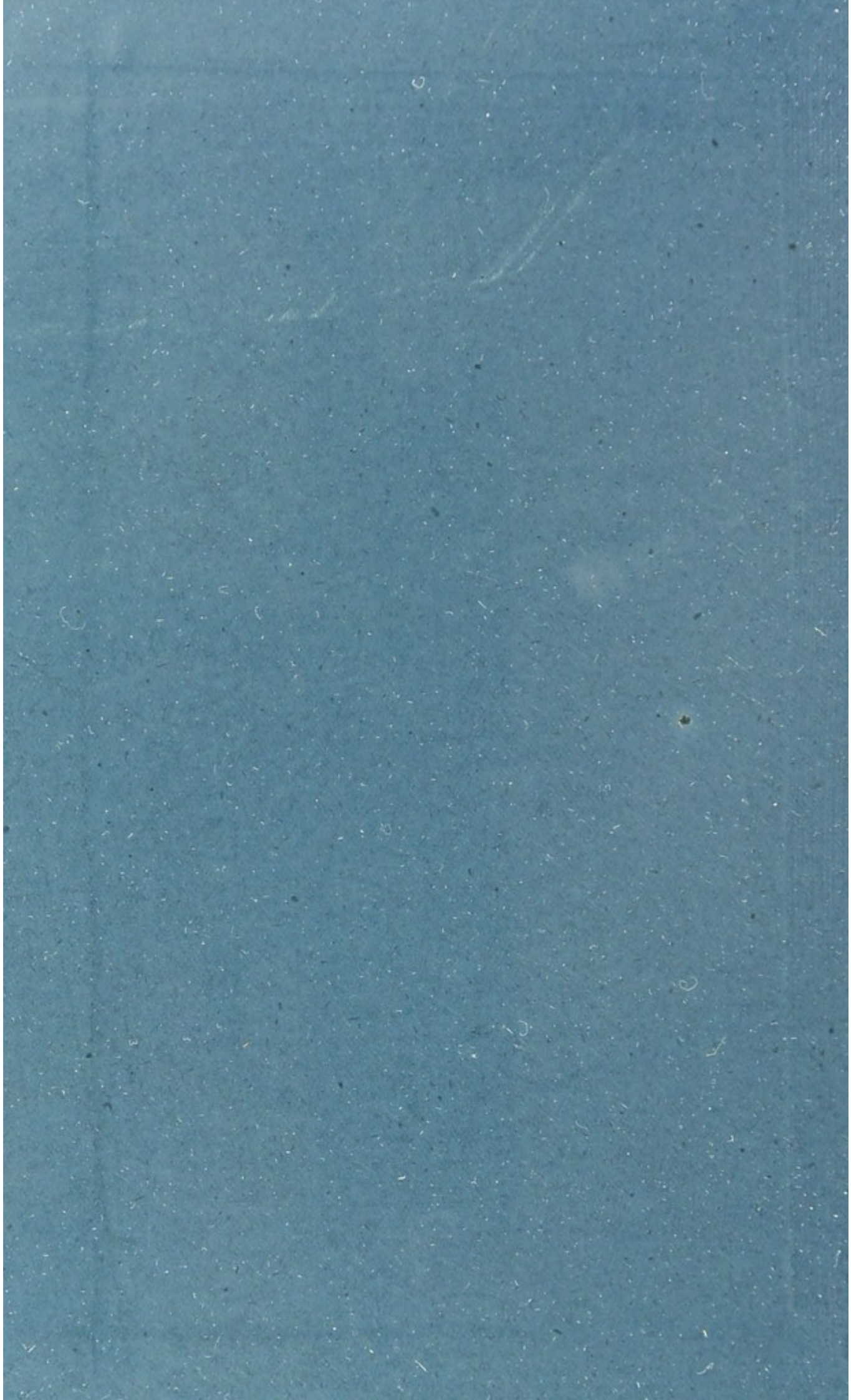
TOM ROBINSON, M.D.



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ETIOLOGY, PATHOLOGY, AND TREATMENT

OF

BALDNESS & GREYNESS

BY

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PREFACE.

I HAVE endeavoured in bringing out this little work on Baldness and Greyness to make the matter as interesting as I could to the student, and at the same time have curtailed as much as possible, consistent with utility, all pathological and descriptive details; and, secondly, I have avoided expensive illustrations. I am of opinion that careful and plain descriptions, attentively and carefully perused, possess great advantages over engraved illustrations (unless executed with extraordinary skill and at enormous expense), and for this reason I have not added to

the following treatise any coloured or plain drawings.

I can only express a hope that my effort may afford some help to those who are interested in the matter which I have endeavoured to illustrate. There is such a rich store of historical and collateral interest in all medical matters that I fear I shall in some instances weary my readers with matter which may be thought useless.

19 GUILFORD STREET, RUSSELL SQUARE, W.C.
May, 1882.

BALDNESS.

ALOPECIA (from ἀλώπηξ, a fox, which animal is said to be subject to this affection) signifies the falling off or loss of hair, whilst *calvities* signifies baldness. Thus alopecia may be said to be the beginning or evolution of the disease; and calvities, or baldness, represents the accomplished fact. The lower animals afford us numerous instances of periodical losses and re-acquisitions of hair and feathers. It often occurs that young ladies at certain periods find that they can comb out their hair 'by handfuls,' and both they and the mothers are alarmed lest they become bald. There is generally no fear of that; for baldness seems in the majority to be the special privilege of the ruder sex. There

can be no doubt, however, that if the repair be not equal to the loss, baldness must ensue. The partings by the brush and comb, in these cases, gradually become wider; and the alarm of young women increases also. The general cause of this kind of alopecia is unquestionably insufficient nutrition of the hair-bulbs, owing either to deficient circulation of the blood through the skin, or imperfect innervation. By proper treatment, by improving the general health, and by attending especially to the restoration of nerve force, the hair will re-appear, and perhaps in a better condition than before.

Alopecia may be congenital or acquired; it may be local or total; it may occur without any apparent alteration of the hair-bulb; it may arise from local inflammation, as in lupus, erythematosus of the scalp, eczema, or burns. Congenital alopecia is very rare, and, if it exists, is commonly only partial. This hairless condition, which may be considered as an arrest of development, may continue for a year or two after birth, or may, in some instances, last during life. Senile baldness is of such frequent occurrence among men of

an advanced age that it almost seems a normal condition of the male head. Let any one, at the meetings of our learned societies, or from the galleries of the House of Lords or of Commons, look down upon the heads of the members of the assemblies, and he will be surprised at the number of shining pates covering so much wisdom. No satisfactory explanation has as yet been advanced why baldness, having arrived at certain points, should be arrested in its advance; for whilst it denudes the frontal bone of the cranium, covering—as is assumed—the intellectual brain, it spares the posterior portion of the skull; for even in extensive cases of baldness, we generally find some hair at the back of the head. May it not be because the back of the head is not so much covered by head-gear as the fore part?

Calvities, as already stated, is of such frequent occurrence amongst old men that it only excites our attention when noticed in a young man under the age of thirty. As a rule, baldness should not commence in a healthy man before the fiftieth year; if it begins much before that time, it is either the

result of hereditary predisposition, or of depressing passions, mental anxiety, constitutional diseases, or is parasitic.

Senile baldness generally commences at the top of the head, where the hair forms a sort of central point from which the hairs depart in different directions. The baldness spreads first in a forward direction. The forehead, being denuded of its covering, now appears of greater height, and imparts an aspect of greater wisdom and discretion to the individual. The hair follicles, in some cases of baldness, are frequently found atrophied, especially those of the scalp ; and in such cases there will be several successive crops of hair, each growth becoming thinner and finer—some looking like wool—until the growth is completely arrested. If the falling out of the hair results from a temporary cause, as observed in various diseases, such as typhus or syphilis, the baldness will disappear with the cause that gave rise to it. We may, nevertheless, see baldness occur in comparatively young and otherwise healthy persons ; in such cases it is generally due to hereditary predisposition. This kind of cal-

vities must be distinguished from the form which is sometimes met with in those who have been oppressed by care or much thought, or any debilitating influence. Voigl has shown that the loss of hair in advanced age takes place in a certain order, and is limited to definite areas in the distribution of certain cutaneous nerves. By section of the sciatic nerve in rabbits, he found that on the part supplied by that nerve hair had not grown four months after he had operated, while in the healthy part the hair growth was normal. Romberg observed that in facial paralysis the hair was shed at the affected part. When baldness is premature, and cannot be traced to hereditary transmission, it is more amenable to treatment than has hitherto been believed. Von Bärensprung is of opinion that failure of nerve-force is the chief cause of baldness. We all know how shocks to the nervous system arrest the formation and development of hair. Persons struck by lightning frequently lose their hair. We find, therefore, that in many cases the judicious application of electricity will prove the most potent remedy we possess

to cure baldness in both sexes. Although we may not be able to trace blood-vessels and nerves in the hairs and epidermis, it would be a false assumption to look upon them as dead formations. We see, indeed, that the cells of which they consist are subject to a series of morphological changes, varying in different parts of the body, but still following a certain law. To reduce these various forms to merely mechanical conditions would be absurd. There can be no doubt that the organs adjacent to the epidermis—namely, the cutis, with its blood-vessels and nerves—greatly influence the epidermis and its covering : pathological experience has confirmed physiological deductions. It does not, however, follow that every change in the epidermic formations is accompanied by a corresponding change in the cutis ; for this may be the result of external agents, such as parasites.

Many dermatologists have named altered digestion as a cause of baldness, also peculiarities of diet. Thus it is said to be met with in certain localities where the inhabitants have chiefly a fish diet. According to R.

Monteith ('Description of the Orkneys'), baldness was for this reason quite common in the Shetlands. It has also been stated that baldness is more common at Brighton and its vicinity than at other places. Permanent loss of hair is, no doubt, due to the atrophy of the papillary vessels. Neuman found perfect hair-follicles which were destitute of hairs, but showed at the base a clump of dark-tinted cells; with this cell mass, however, he was unable to discover any remains of papillæ. I have frequently found as many as three downy hairs protruding from a follicle; but as this position is of constant occurrence in many races (negroes), one cannot regard it but as a normal one.

Alopecia Universalis.—Dr. Carson records in the 'Edinburgh Medical Journal,' vol. v., a remarkable case of complete depilation. The patient, aged thirty-five, tall and muscular, and apparently free from any constitutional disease, noticed one day, on shaving, a bare spot on the right cheek. On going to have his hair cut the same day, the hairdresser called his attention to a circular bare spot on his occiput. From this day the respective

bald spots enlarged until he had not a hair left on his head, on his face, or on any other part of his body; during the progress of the depilation the patient felt neither pain nor any inconvenience. Three months after the loss of the hair, the nails of the fingers became brittle, shrunk, and dry, but did not quite fall off. I was fortunate enough to exhibit a man at the Pathological Society who had an exactly similar condition, so far as regarded the universal loss of hair; but the noticeable peculiarities in my patient were: The symmetrical progression of the malady; the loss of pigment as well as loss of hair on the invaded patches. Two such cases have also come under my observation; both are women in middle life, and in both cases the condition has spread from centres starting from the same positions on both sides of the body; and there has been in each instance decided paling of the skin, and a distinct convex line of demarcation between the healthy portions and the diseased spots. The health has not suffered in any of my cases, and the baldness has been permanent. I examined carefully the hairs in each instance, but did not discover any

parasite ; in fact, I should have been surprised to have done so.

Skin affections which advance in a symmetrical manner cannot be due to parasitic causes. My cases I look upon as constitutional, as much as I should psoriasis or leucoderma ; in fact, I would go so far as to argue that there is a very intimate connection between this condition and leucoderma ; for in leucoderma we find the same symmetrical progression, the convex edges of the patches, the freedom from failing health, and the incurable nature of the malady. The sweat glands were not implicated in my cases. The nails were not affected, and the family history was free from any taint of constitutional skin affections. I cannot help thinking these cases are much more common than believed, as they have so seldom been described ; probably those who suffer are anxious to hide their hairless state, and do not seek advice. For the same reason I have often discovered hairless portions of skin when examining patients for other conditions, especially on the outer aspects of the limbs of those who have much friction of the clothes upon the skin ; and it

has appeared to me in some cases of prurigo that the itching has been caused by the hairs being prevented from making their exit owing to this pressure. It is at least curious that the irritation occurs in those situations which are exposed to this pressure. I have under my care at the present time a street musician, who by a very ingenious contrivance is able to play upon several instruments at the same time; and in the movements which are necessary for him to accomplish his pandemoniary feat he is exposed to much rubbing of the outer portions of his thighs and arms, and in these situations the hair follicles are shotty and the hairs are rubbed off, and he says he digs out little seed-like bodies. Are not these seed-like bodies distended hair and sebaceous follicles?

Baldness from Fright.—A curious case of complete alopecia is reported in the 'Gazette des Hôpitaux,' No. 83, 1879. A girl aged seventeen, who had always enjoyed good health, had one day a narrow escape from being crushed by a floor giving way beneath her. She was very much frightened, and the same night began to complain of headache

and chills. The next morning she felt restless, and had itching of the scalp. During the following days she steadily improved, with exception of the itching. One day on combing her hair, she noticed that it came out in great quantities. Three days later she was perfectly bald, and in two more days she lost every hair on her body. Her general health was good. The patient remained bald, and was still so when seen by the reporter two years later. It has not been my good fortune to notice such a case. In one instance a patient of mine narrowly escaped being burnt to death, and in her case the hair of her head was nearly completely shed, but it grew again.

Etiology of Calvities.—Among the exciting causes of baldness are enumerated excesses *in Baccho et Venere.* Thus Gumer gives a long list of bald emperors who had distinguished themselves by their dissipated habits—Tiberius, Claudius, Galba, Commodus, Henry III. of France, &c., &c. A modern author says: *Samsonem rigidis spoliavit crinibus uxor: hoc nostro multae tempore sunt Delilae.* There are few if any instances on record of baldness occurring before puberty.

Either the falling off is the result of general debility consequent on severe illness, or the result of local disorder. In either case the chief cause will be found in a defective circulation, and very often with a different colour. Drunkards are said to become prematurely bald, but this is a question very difficult to decide.

Inheritance of Baldness.—As regards the inheritance of baldness and the colour of the hair, I have seen the case of a married couple whose fathers were both red-headed, but not having red hair themselves, who had four red-headed sons. Rayer cites the case of a man with congenital deficiency of hair so that his cranium appeared completely bare. The man's father presented the same defect. Dr. Danz (Stark's 'Archiv') records the case of a family in his neighbourhood in which two adult sons neither have nor ever had hair or teeth; the baldness was hereditary. I know an instance where all the sons have become bald at the age of twenty-five. The correlation of peculiarities of hair and teeth in the same individual is not uncommon. Patches of grey hair, often one-sided, are not uncom-

monly seen, and when met with will be found invariably to be inherited, unless such patches have been preceded by severe pain.

Parasitic Affections of the Hair.—This little work not being a treatise on skin diseases, we can only notice such cutaneous disorders as in their progress implicate the structure of the hair. Some cutaneous diseases are due either to an animal parasite or to the presence of a vegetable parasite the former called *dermatozoa*, the latter *dermatophyta*. The parasites which are formed in the interior of the body of course do not concern us here, nor those which merely affect the skin, such as the itch, mite (*acarus*), or the different kinds of body lice. We shall, as already stated, treat here of only a few skin affections which influence the condition of the pilous system, such as Tinea favosa (honeycomb ringworm), Tinea tonsurans (ringworm of the head), Sycosis (ringworm of the beard), and Alopecia areata. The latter is a species of baldness which has been a bone of contention on many occasions. It was described by Celsus (lib. vi. c. 4, 'De areis'), under the name of area, presenting

patches of a more or less circular form; this disease is not uncommon. On the patches the hair is entirely absent, and they are surrounded by thick normal hair. There are two varieties of this affection, or rather two conditions of the same variety: one known as *Alopecia areata*, in which the patches are circular and discrete; the other in which the circular patches run into each other and present a curious serpentine appearance. This state has been designated Ophiasis. The areæ sometimes enlarge and become confluent, when extensive loss of hair results. This disease, which has received a variety of names, such as Tinea decalvans (smooth ringworm), Pelade of the French, usually commences with itching on some part of the hairy scalp. The hair growing on this part readily comes out when pulled, or spontaneously falls out, until the spot is completely denuded. The disease is far more common in children than in adults, and it is undoubtedly contagious. And in many cases it can be demonstrated beyond a doubt that there is present a vegetable parasite, the Microsporon Audouini, which will be detected on the hair taken from the edge

of a bald patch which is spreading. Dr. Thin showed three cases at the Pathological Society all afflicted with this disease, and all belonging to the same family. And the communicability of the malady was proved in a case of my own where I was able to trace the transmission of the disease in the following manner: A lad was brought under my notice with a well-marked smooth patch of alopecia on the right parietal bone. This was treated in the ordinary manner, and the lad cured. But unfortunately his cap was given away, and the boy who wore this cap contracted the disease. Much of the controversy and conflict of opinion respecting this malady has arisen from the bald patches which often follow ordinary ringworm, especially where the disease has been arrested by powerful local applications—applications which have destroyed the hair. In these instances, which often remain permanently bald, no parasite will be found. Again, the constitutional baldness which is a progressive symmetrical malady is due not to the invasion of any vegetable or animal parasite, but to some general undiscovered cause. It is, I

do not doubt, the mingling of these maladies in the medical mind which has given rise to the sometimes angry discussions on this subject.

Tinea tonsurans (Herpes tonsurans, porrigo scutulata, school ringworm) is no doubt caused by the vegetable parasite tricophyton tonsurans in the substance of the cuticle and of the hair. The hair growing from the affected spot becomes more or less discoloured, brittle, and breaks off near the root, giving a stubbly appearance to the patch, which has on its surface dirty scales, and is generally vesicular. The margins of the patches are well defined; several of them may coalesce and present extensive shorn surfaces of irregular shape. The structure of the hair is altered, and the intervals between the fibres are filled with the spores of the trichophyta. These spores measure about $\frac{1}{5000}$ of an inch across. The Greeks described the pustules and scales of the scalp under the name of ἄχωρες. The Latins, whilst preserving the name of *achores*, called the scalp under these conditions also *favus*. The word tinea (a worm) was probably given to the disease on account of the ravages

produced by it on the hair as by the moths on fur. Almost every dermatologist of note has proposed his own classification and specified a different number of kinds of tinea. To obviate this difficulty and confusion, many physicians (wisely I think) would confine the term tinea to diseases affecting the hairs.

Tinea favosa.—Tinea vera, by Terry; Mycosis achorina, by Virchow. The true nature of this disease seems scarcely to have been known to the Greek and Latin physicians, whilst the Arab physicians recognised it as a special malady. In 1714 Turner proposed to divide all chronic skin diseases into two great classes; that class affecting the body was included under the common name of Herpes, that affecting the scalp under *Tinea*. Willan, finding the term Tinea much too vague, substituted that of *Porrigo*, of which he admitted two varieties, *Porrigo favosa* and *Porrigo scutulata*. Bateman, the pupil of Willan, further subdivided it into six varieties. The system of Willan and Bateman prevailed in England and mostly on the Continent, until in 1839 Schoentein discovered in the scabs of

favus a vegetable cryptogam, so that favus was now considered as much a parasitic disease as itch. The parasite has been met with as frequently in the bulb and substance of the hairs as in the scabs of the disease. I may here mention that much diversity of opinion still prevails with regard to the vegetable parasites of the skin. Some look upon the cryptogams as the cause of the disease, others as the consequence. There are others again, especially in England, who hold that there is only one vegetable parasite which produces the various parasitic affections. Some endeavoured in 1857 to demonstrate the identity of achorion with other vegetable growths observed in sycosis, herpes tonsurans, &c. Hogg, Hebra, and especially Tilbury Fox, were nearly of the same opinion. They considered that the Microsporon Audouini represented the cryptogam in its primitive state, of which the achorion was the fully developed fungus. Other dermatologists are of an opposite opinion, and think that the parasites represent different species, which can be recognised by means of the microscope, apart from their different location and the different alterations of the skin which they produce.

Sycosis, Mentagra, Chin-whelk.—Pliny (Historia Naturalis) gives in the first chapter of his twenty-sixth book an account of an unknown disease which, according to his statement, was imported by a Roman knight into Italy from Asia. It gave little or no pain, nor was it dangerous to life, but it caused such a deformity that death was preferable ('sine dolore quidem ac sine pernicie vitae, sed tanta foeditate, ut quaecumque mors praeferenda esset'). It was first called by the Greek name 'Lichenas,' but afterwards *Mentagra*, on account of the chin being the chief seat of the affection. Women and, what certainly is remarkable, the lower order and the middle classes were not attacked; but the nobles suffered severely and spread the disease by their habit of kissing each other. Numbers of physicians came from Egypt for the sole purpose of combating the disease, and reaped a rich harvest. The treatment consisted mainly in the application of caustics, which, unless the skin was burnt down to the bone, did not prevent relapses. The description given by Pliny of its ravages and of its epidemic character is probably much

exaggerated ; but he mentions one characteristic of the affection which is even now peculiar to some forms, namely, its obstinacy and its liability to return unless radically cured.

Aelius Amidenus, a physician of the fifth century, relates in his 'Tetrabiblos' that one Pamphilos successfully treated at Rome the mentagra described by Pliny by a blistering ointment consisting of oxide of copper, orpiment, hellebore, and cantharides; in fact, by a very powerful depilatory ointment.

Celsus gives in the sixth book of his 'Treatise on Medicine' a pretty fair description of this disease. There is an ulcer, he says, which the Greeks call *sycosis*, because of its resemblance to a fig (the inner part of a ripe fig is probably meant), and he goes on to describe it with considerable minuteness. The first form ('durum et rotundum'), he says, is limited to the beard, and is probably true sycosis ; but the other variety, which, he says, attacks the scalp and is moist, and discharges freely offensive matter, is probably not a sycosis, but what we now know as contagious porrigo.

This species of tinea, called *sycosis* or *men-*

tagra, is a disease of the beard, moustache, and whiskers, being most frequently found upon the chin, rarely affecting the scalp. It is characterised by spots of erythematous inflammation, involving the hair follicles, which patches frequently suppurate, and give rise to considerable induration ; and in some patients surrounding eczema is set up by the irritating influence of the discharge. The hairs which are attacked are easily extracted, and the bulb will be found to be black at the end. There is seldom any difficulty, even with a low power, in demonstrating the presence of the microsporon. As the eruption increases, the hair follicles become more involved, and many of them obliterated, so that, if the disease be not checked, permanent bald patches may be left. The rapidity with which this disease advances is in some cases surprising. It is not uncommon to find a patient who has a susceptible skin much irritated by a discharge from a catarrhal state of the nasal mucous membrane about his nostrils ; and I have notes of three cases where in about twelve days a true sycosis has existed. There is another variety of the malady

which is found amongst men who are engaged in shoeing or grooming horses. These animals are subject to a malady which is known as the 'Grease,' which in reality is a parasitic disease attacking the heels of horses; and I have in my possession the portrait of a man who cut his lip whilst shaving, and who almost directly afterwards shod a horse affected with this malady. In three days he consulted me, with a condition of his chin and beard in all respects like sycosis, and the hair follicles were invaded by the cryptogams. I may say this man got rapidly well under the ordinary treatment for sycosis.

Although we have enumerated sycosis among parasitic affections, we are bound to state that some of the principal dermatologists, both in this country and on the Continent, such as Wilson, Hebra, Bärensprung, and others, doubt the existence of a sycosis parasite. Hebra looks upon the disease as a local inflammation having its seat in the hair follicles, whose origin, he adds, is altogether unknown to him, and dermatologists have been challenged to prove its cryptogamic origin by demonstration before a pathological society.

This challenge was accepted by McCall Anderson, who, at a meeting of the Medico-Chirurgical Society of Glasgow, held in January 1868, demonstrated without a doubt that the disease was associated with a fungous growth attacking the hair follicles. The fact seems that, as regards its cause, there may be a parasitic variety and a non-parasitic; so that tinea sycosis should, as Tilbury Fox suggested, be confined to the parasitic variety as contradistinguished from sycosis. And probably these cases, which one so often meets with, which baffle all our treatment, are not parasitic, but due to some directive agency governing the individual, such as scrofula or syphilis.

Among the diseases which give rise to the falling off of the hair must be mentioned pityriasis and *acne pilaris*, which attacks the sebaceous glands which are connected with the hair follicles. Alopecia, as we have stated, is often met with in constitutional syphilis. Out of seventy patients labouring under this disease, I find fifty-nine had more or less loss of hair, and it has supervened from the third to the ninth month in my

cases. Syphilitic alopecia commences generally on the vertex of the head, which is denuded often very rapidly. It may then affect the whole scalp. The hairs lose their gloss, become dry, discoloured, and are easily combed out. True syphilitic alopecia need not be accompanied by local phenomena of eruption or desquamation, as it evidently depends on a special modification of the general economy. It is rarely general, mostly being limited to the summit and anterior part of the head. The loss does, however, in some cases extend to the eyebrows and the beard. This kind of alopecia is mostly transient; the hair grows again after the syphilis has been combated by a rational treatment.

The shape of the head would appear to have something to do with the production of baldness. Very pointed crania present generally very few hairs on the frontal region, while high-arched crania present the same deficiency on the vertex.

Canities, Piliosis, Greyness, or Hoariness of the Hair.—The loss of the colour of the hair is due either to advanced age—the physiolo-

gical cause—or to disease, or in some instances it may be caused by strong mental emotions.

The time of the appearance of that unwelcome visitor, the first grey hair, depends upon numerous circumstances. In most cases the grey hairs make their appearance singly, and the blanching is first noticed at the point, whence it gradually spreads over the whole hair. Sometimes, however, the hair becomes first grey at its issue from the skin. There is no doubt that fat is the chief cause of the colour of the hair. This fat is equally distributed upon the cortex of the hair ; alkaline substances dissolve the grease and discolour the hair. Fatty substances in the form of pomatum render it a little more coloured. The direct cause of the colour of the hair is the action of the sebaceous glands which supply the fat to the superior portion of the hair follicle. We may thus better understand the cause of sudden blanching. Dark hair contains little air. Light hair, besides possessing fat, contains a large quantity of air. Kölliker places the seat of the air in the medullary canal, whilst other physiologists say it is distributed between the cortical cellules. The

coloured fat is thus the positive cause of the colour of dark hair.

Etiology of Canities.—We have seen that, according to the prevalent opinion among anatomists and physiologists, the blanching of the hair is chiefly due to the disappearance of the dark pigment. Pfaff entirely dissents from this opinion, however plausible it must appear. On examining many white human hairs under the microscope, he found the medullary substance well filled with dark pigment cells. But how, it might be asked, can a hair filled with dark pigment cells look white? Simply because the cortical substance of the hair is so dense that the pigment cells do not show as before. In flaxen light-coloured hair the light passes through the cortical substance; in the white hair the cortical substance reflects the light. It is this cortical substance which has undergone a change, as it now reflects the light like thick frosted glass, whilst formerly, when the hair appeared of a brown colour, the light was allowed to pass.

The pigment may disappear entirely in very advanced age, but in the grey hairs of

young persons the pigment of the medullary substance will be found in many instances unchanged. But just as there are grey or perfectly white hairs with dark pigment cells, so are there dark hairs without any pigment cells whatever.

On examining closely red hairs it will be found that the epithelial layer being scraped off, the cortical substance shows a reddish tint. For this reason there are perfectly red hairs entirely wanting red pigment in the medullary substance. Brown hair consists, in every part, of a light brown horny mass; blonde hair of a faint yellow horny mass ; and only white hair shows, with the exception of the medullary substance, a perfect colourlessness of the horny substance. We can easily ascertain the correctness of this observation, which runs counter to the assertion contained in nearly all manuals of physiology, with reference to the colourlessness of the epithelial layer and the horny fibres of the cortical substance of the hair, by bleaching a brown hair in chlorine gas. Chlorine soon deprives the epithelial layer and the cortical substance of its colour, and the brown pigment in

the medullary substance remains unaltered. Nevertheless, after a short action of the chlorine, the hair appears of a bright yellow, and after a longer action quite white; but the chlorine has only taken off the colour of the horny mass of the epithelial layer and of the cortical substance.

Among the remote causes of greyness must be first mentioned heredity. Numerous instances of this kind are cited by ancient authors; an old author writes *Canities certis familiis gentilitia.* It is, moreover, asserted that children of aged parents become sooner grey. Greyness of the hair may be congenital. Virgil ('Aen.' i. 6) says that Numa Pompilius was born with grey hair, and so it was said was Tarquinius. Seneca is asserted to have received his name from the same circumstance. It was formerly believed that such as become grey in early age die a premature death. Daily experience shows that there is no foundation for such a belief. I know of a family all of whom became grey at twenty-one, but they have all lived to advanced life. Voigl, Zeiler, and Plenk quote similar instances. Even trifling peculiarities in the

disposition of the hair re-appear in descendants. Thus the late Mr. C. Darwin states that he knew an Irish gentleman who, on the right side of his head, had a small white lock in the midst of his dark hair, who assured him that his mother and grandmother had the same peculiarity. Mr. Darwin further states that Dr. Hodgkin told him of an English family in which for many generations some members had a single lock of hair differently coloured from the rest of the hair. Mr. Hutchinson told me of a similar instance, and I have in my note-book several cases all of which have been inherited; all have been in strands. The hoariness of the aged usually begins at the temple, whence it gradually spreads to the whole of the hair. The colouring matter is no longer provided in the same quantity, or is wholly withheld. The loss of colour may be partial or general. Greyness in tufts is often noticed in the head and beard, owing to some local affection of the skin. Hairs which grow in scars are usually white. The greyness of the hair is normally a very slow process. The grey hairs are at first very few, but gradually they

multiply. In the great majority of cases men do not become grey before they are forty. Women retain the colour of the hair to a later period.

The nervous influence upon the hair, whether as regards baldness or greyness, is abundantly proved. Dr. Anstie (Reynolds's 'System of Medicine') writes, that after an attack of facial neuralgia he noticed that the hair of the eyebrow was whitened, and that grey hair was thickly strewn over the right side of the head for some time after the attack.

Sir James Paget tells us, in his lectures on 'Surgical Pathology,' p. 31: 'No tissue, indeed, seems to be wholly exempt from the influence of the nervous force on its nutrition, In the cuticle it is manifest; and, for its influence in acting even through a considerable distance, I may mention a case which is also in near relation to those in which the hair grows quickly grey in mental anguish. A lady who is subject to attacks of what are called nervous headaches, finds in the morning, after such an one, that some patches of her hair are white as if powdered with starch. The change

is effected in a night, and in a few days after the hairs gradually regain their dark colour.' This extract leads us to the discussion of sudden blanching of the hair. Thomas More's is said to have become grey in a single night after being condemned to death. Lemnius relates the case of a young man whose hair and beard became grey in a single night after being sentenced to death, and who was so altered in appearance that no one could believe he was the same person, for which reason the emperor pardoned him. The story of Diego Assarius is well known. Thomas Campanella saw a monk at Rome, named Ubipertus, who had been elected bishop of Ratzeburg, but was too young for the office. He went to Rome to obtain dispensation from the Pope; but, being refused, became quite grey during the following night, so that the Pope could not recognise him at first, but gave him the dispensation, saying, 'Quem evidenti signo Deus probasset.' Shipwrecked persons have sometimes become grey in a short time from fright. Henry IV. is said to have become grey within twenty-four hours about the time of St. Bartholomew's night. The story

of Marie Antoinette is well known. The cases are so numerous of care and anxiety giving rise to grey hair that it has become proverbial. *Curæ facit canos, quamvis homo non habet annos.* Dr. G. Vogel says of himself that when he lost his beloved wife he became grey in a single night in his thirtieth year. We all remember Shakspeare's lines :

> 'Worcester is stolen away to-night ;
> Thy father's beard is turned white with the news.'

I have seen a man suffering from delirium tremens whose hair turned grey after a violent fit of passion lasting several hours. It is not only the hair which is influenced so much by the nervous system. The blanching of the skin and blushing during anger are parallel instances. Young children become incontinent frequently when frightened. The lower animals pass urine frequently when thrashed. The secretion of the liver appears to be much under the influence of the emotions. One of our prisons in London caught fire a few years back, and it was doubtful whether the outer wall would not tumble down. The fear of this had such an influence upon three

of the warders that they became distinctly jaundiced a short time afterwards. Numerous theories have been advanced to account for the rapid turning grey of the hair during violent emotion. It has been argued that the acidity of the sweat bleaches the hair, but it would appear to be more probable that the whitening is induced by the action of the muscular fibres of the hair and sebaceous follicles. But the *modus operandi* has yet to be explained. We know that the condition of the nervous system influences the glands and their secretions. We know that there is a connection between the secretion of the sebaceous glands and the colour of the skin. Is it, then, too much to say that the nervous disturbance arrests the secretion of the fatty matter? Haller, as is well known, questioned the truth of all cases of sudden greyness; but Bichat says that he has himself seen six, if not more, such cases. Fright, we know well, causes the hair to stand upright, and painters have been wont to depict standing hair in order to express terror.

The treatment of greyness must consist in using a simple pomatum with some stimu-

lating ingredient. All the hair dyes are injurious; and I do not see why I should give formulæ which might be used for vain reasons, or to rob old age of the beauty and dignity which white hair so often gives it.

Treatment.—I have avoided any reference to treatment while discussing the different forms of baldness, believing it would be better to take each variety separately and endeavour by a rational therapeusis to place before my readers the plans which have been adopted for restoring the hair. The only way of accomplishing this is to discriminate the varieties of the condition, and, taking the indications for treatment from the pathological state, endeavour in each instance to combat the cause. I am conscious that many of my formulæ are complicated and old-fashioned; but I am convinced that the more agreeable we make our preparations which have to be applied to the surface of the body, the more will our patients be pleased to apply them, and the greater will be our success. The form of baldness which we find occurring in young ladies, and which is undoubtedly but an expression of a general state of health, requires

usually that the patients shall be impressed with the necessity of spending much time in the sunlight, and having their hair cut at least every two months. The diet should be generous, with good red wine; malt liquors if they can be taken. The scalp should be washed every other night with mixture made with the yolk of an egg, a small pinch of borax, and one pint and a half of tepid water. This should be freely used for ten minutes; afterwards the head is to be well cleared from the egg (otherwise the hairs will be glued together in the morning) and the following pomatum used; that is, to be well rubbed into the hair roots.

Medullæ Bovis	℥jss
Ceræ Alb.	ʒss
Balsam. Peruv.	ʒss
Liquor. Epispastici	ʒss
Ol. Rosmarini	♏ iv
Ol. Rosæ Essent.	♏ ij

Melt the marrow and wax together, then strain, and when nearly cold add the Peruvian balsam and other ingredients.

The patient should at the same time be treated on general principles. I believe

that the falling off of the hair in the aged has been retarded by this treatment.

The management of alopecia areata is always associated with very pleasing remembrances. Believing, as I do, in the communicability of the disease, I use in the first instance an ointment made as follows :—

Acidi Carbolici	ʒj
Hydrarg. Bisulphureti . . .	gr. x.
Lycopodii	gr. iv.
Glycerini	ʒj
Adipis recentis	ʒviij

Misce.

This I order to be well rubbed into the bald patches every night for two weeks, previously cleansing the scalp with the egg and borax wash. I then direct my patient to use the stimulating pommade until the hair grows, and in no single instance have I failed to find the hair grow again. In one case which I was disappointed about, I found the bald patches were the sequelæ of true ringworm, and resulted from the use of a parasiticide strong enough to destroy the hair follicles.

In ringworm of the scalp I always refuse

to treat the case unless the child has the head shaved, believing it to be impossible to bring any remedy into contact with the fungus unless this be done. I then direct the scalp to be well washed with a liquid made by dissolving one dram of the Pharmacopœia soft soap and half a dram of carbonate of potash in twelve ounces of orange-flower water. After this is done I direct my patient to wear a piece of lint covered with oilskin continually for a week, which lint is saturated every two hours with the following lotion :—

Hydrarg. Bichloridi . . .	gr. vj
Acidi Carbolici	ʒj
Sp. Vini Rect.	ʒvj
Glycerini	ʒvj
Aquæ	ad ℥vj

Misce.

After this has been earnestly carried out, I am sure the disease will in but few instances give further trouble. The rings will probably be scaly for some time afterwards ; but if the head is kept clean and the nitric oxide of mercury ointment of the Pharmacopœia used at intervals, the normal appearance

will be resumed. I have tried stronger parasiticides on many occasions, sometimes in the form of ointments, sometimes as strong applications which I have painted on; but the success I have met with has been very much less than when treated by the lotion. The wonderful penetrating property of the glycerine, which mixes just as readily with fat as with water, carries down the carbolic acid and perchloride of mercury to the very bottom of the hair follicles, and destroys there the mycelium or sporules as the case may be.

In treating tinea favosa, I have been obliged to poultice the scalp for some days, and to take considerable pains in the removal of the hair, before I could apply exactly the same treatment for this advanced stage of ringworm. In treating sycosis of the beard, I have always directed my patients to shave; and where this has been done—without so much pain and difficulty as might be expected—I have told my patients to bathe the affected spots with a warm lotion made with borax and carbolic acid—two drams of the former and one dram of the latter to the

pint; afterwards, to rub in freely equal parts of the oleate of mercury and glycerine. I have tried epilation, and, if it were thoroughly done, it appears the most efficacious treatment; but usually your patient will not submit to your extracting the hairs, and it is a tedious process; and, if left to himself, it is but partially done, and your difficulty in bringing your remedy to the fungus is almost insurmountable; whilst by shaving you expose the mouth of the hair follicles, and by so doing permit the parasiticide to penetrate the sac.

Eczema, pityriasis of the scalp, seborrhœa, and lichen pilaris will often tax our ingenuity greatly. In fact, eczema of the scalp is one of the most obstinate conditions we ever meet with. It is very often but an expression of a general dartrous state, and when this is the case requires constitutional treatment; but it is to local remedies we must look for the best results. In the first instance, the head must be well washed with the shampooing liquid, freed from all crusts, scabs, and secretion. The hair should then be cut short, and an ointment carefully and freely

applied to the entire scalp, made as follows :—

Hydrarg. Amm. Chloridi . . .	ʒss
Unguent. Hydrarg. Nit. Dil. . .	ʒss
Lapis Calaminaris	ʒss
Ol. Palmæ purificati . . .	ʒss
Ol. Amygdal. Amar. . . .	ɱij
Vaselini	ʒviij

Misce.

In pityriasis of the scalp, which so often produces loss of hair, it is wise to wash the head freely with the egg and borax lotion, and to use as a pommade the following :—

Hydrarg. Oxidi Flavi . . .	ʒss
Glycerini	ʒss
Zinci Acetatis	gr. ij.
Ol. Neroli	ɱiij
Adipis recentis	ʒviij

Misce.

It so often occurs that pityriasis and lichen pilaris are but expressions of a dartrous diathesis—for it is common to find either or both associated with eczema and psoriasis—that it is wise to give with either condition arsenic, in steel wine, with the meals.

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