

JUN 29 1950

A L E C T U R E
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TREATMENT
AND
PRESERVATION OF THE HAIR.

DELIVERED BY
M. JACOBY,

AT THE MASONIC TEMPLE, BOSTON, FRIDAY EVENING, FEBRUARY 23, 1849.

[PUBLISHED BY REQUEST.]

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No. 18, EXCHANGE STREET.

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189 Symmachus

A LECTURE

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M. JACOB

OF THE HAIR, AND THE EFFECTS OF THE HAIR

ON THE HAIR

1840

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No. 12, Exchange Street

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LECTURE.

LADIES AND GENTLEMEN :

In addressing you upon the subject of the Hair, and its diseases, with the method to be adopted for successful treatment to insure its healthy development, and the cure of those affections which occasion its premature loss, I shall speak with the confidence produced by successful experiment;—and, trusting to the certainty of the knowledge which I have obtained, shall only advocate that course which I have personally tested, and found correct. To avoid the charge of egotism,—which would, of necessity, apply to me, should I rely wholly upon my own investigation for the information I possess, relative to the preservative and restorative treatment required for the accomplishment of so desirable an end,—my remarks will be based upon the anatomy and physiology of the scalp, as described by the most eminent medical writers. In describing the different forms of disease, I shall adopt divisions suited to the result obtained from treatment.

We all, doubtless, realize the importance to be derived from a healthy head of hair. It not only elevates the standard of intellectual appearance, but, in its connection, is the most ornamental and useful appendage of the human system. As an ornament, it

gives a graceful outline to the bony walls and integumental covering of the mind's magazine; while among the many useful purposes which it subserves in protecting from external invasion, may be enumerated its non-conducting qualities — by which it is enabled to equalize the temperature of the brain, when subject to atmospherical and artificial vicissitude. The hair is also useful in protecting the head as a covering from accidental blows, falls, etc.

But we will now pass to the anatomy of the integument and hair, as by every class of persons it is held in relative estimation, according as it adds to or diminishes their personal attractions. The human hair occupies a portion of the scalp (or muscle termed the *occipito frontalis*) which arises from the occipital ridge; and, after passing over the superior and lateral portions of the head, is attached to the palpebral process, extending from the outer angle of either eye, forming that portion which gives prominence to the eyebrows. There are also the muscles which are united with and slightly influence the circumscribed motion of the scalp, the structure of which partake in some degree of the peculiarities common to that tissue. The hair only covers that portion of the head extending from the frontal suture laterally to the posterior base. The part of the integument covered with hair, possesses the same principles of physical structure and sources of nutriment, that belong to the general surface of the body. Indeed, the appearance of the external surface of the integument in which the hair has origin, closely resembles that covering the rest of the body, having the same papular openings which belong to the porous passages of the absorbent system.

Hairs are horny appendages which have origin from various portions of the body, but grow in the greatest abundance upon the

head. They are produced by involution of the skin which lines a cavity, the opening of which gives egress to the hair when formed, by the secretion established for this novel purpose. The hair is formed by involution, which originates the follicle in which the rudiment of hair is inclosed: when perfectly matured, the shaft of the newly formed hair is forced out, and receives its future support from the nutritive function established for this important change. Thus the hair is, in reality, formed from the evolution of the same skin that was involved, under the stimulus of a new formative process, from which is derived its intended function. Notwithstanding the entire surface of the body possesses the rudiments of hair, they are never perfected in growth except upon the head.

We derive the following facts relative to the structure of the hair when examined with a microscope. First, the shaft of the hair is in reality a flattened tube, soft in its internal structure, having a dense horny exterior, affording grounds for the still mooted question, whether it possesses a cortical and medullary structure or formation.

The free end of the hair generally approaches a point, and is often, when it has attained its full growth, divided into filaments. But, from an extended examination, I am inclined to attribute this fact solely to the effect of disease. The bulb, or that portion imbedded in the integument by the process previously described, increases in size, and extends through the dermis (or true skin) into the subcutaneous or areolar tissue, where it is surrounded by fatty nutritive vesicles. The root is expanded beyond the average capacity of the shaft, being egg shaped when fully formed, and conical in those not fully matured. The hair is thus formed, and

the adjoining parts are adapted to its growth. That rough barb-like sensation, experienced from drawing a hair through your fingers from its point, is occasioned by the wavy screw-like lines compressed upon the circumference of the shaft, as it emerges, from absolute contact with the scales separated from the epidermis, (or second layer,) and those of the scarf skin, (or first layer.) This fact led some of the ancient writers to suppose that branches separated and grew from the circumference of the shaft. The bulb of the newly formed hair corresponds in figure with that of the pulp; and its enlarged form is due to the greater size of fresh cells, as compared with the fibres and scales into which they are subsequently converted in the shaft of hair. The color of hair is derived (like that of the epidermis) from granulated pigment, supplied by the cells. This differs in different races, also from constitutional predisposition.

We will pass the many theories offered to explain the growth, origin, and method of nourishment as unprofitable,—being mere matters of speculation, without sure basis for demonstration; and proceed to describe some of the most common forms of disease, as they affect the hair—to retard its growth and hasten its loss.

The hair is influenced by a variety of causes which tend to its destruction. Its loss may arise from a lack of nutritive support, or from a derangement of some organ, distant—but necessary—for its healthy preservation. Or, it may suffer from local affections, as inflammation of the formative pulp, the hair follicles,—in other words, the sack which forms the root or bulb of the hair.

Each of these will be spoken of in tracing and separating different forms of disease. But we will now pass to those forms of disease common to all classes and every variety of temperament, although the degree may be influenced by various causes.

First,—Diminished formation of the hair, or baldness from defective development of the formative pulp. This form of disease may take place from impeded circulation of the blood through the integument, but it usually arises from congenital predisposition. In either case, the indications furnished for treatment are, to relieve the head from the influence of accumulations arising from its own secretions, collecting upon the surface of the scalp; by washing the head of the child daily with a sponge, being careful to wipe, with a napkin, the surface perfectly dry. Afterwards, apply a tonic to the surface, which should be free from irritating substances. If the cause arises from imperfect circulation, gentle stimulation should be practised with brushing.

We shall secondly consider the more common affections which occasion baldness after a full development of the hair is established. These present a great variety of forms combined from all those external influences which conspire to interfere with the healthy display of organic power. Accidental causes, the first to be considered, may occasion transient or permanent loss of the hair.

Those accidental influences which act by destroying the hair without injury to the integument, are peculiarly susceptible to remedial treatment, which, if properly judged of, with reference to the cause to be removed, will afford certain means of recovery.

But the loss of hair from any accident that subjects the integument to subcutaneous inflammation, which subsides, leaving a cicatrice, is beyond the hope of recovery. Among the former class, or those which cause a transient loss of the hair, leaving the integument free from deep-seated inflammation, may be reckoned that form of erysipelatous disease arising from slight wounds or irritating applications. If these are controlled by remedies in their early

stages, ulcerative inflammation rarely, if ever, takes place to a depth sufficient to influence the hair bulb, further than to occasion the separation of the shaft of the hair at the neck.

Hair separated from the bulb at the neck by superficial inflammation of the epidermis, and deciduous or scurf skin, whether occasioned by wounds or irritating applications, may be, in every instance, restored; although, from neglect and a lack of requisite knowledge, the growth of the hair is delayed, and often permanently lost.

Whenever the tone or the integument is recovered after an attack from erysipelas of a mild type, or from infectious disorders which are of a superficial order, it should be the first care of the person suffering, to see that none of the accumulations forced by disease remain. Water, if used with discretion, will aid in restoring nervous energy, and remove all irritating substances from the surface. But great care should be observed in removing all moisture from the surface, as the vapor liberated by the heat of the integument, would prove more injurious than the natural course of the disease.

In the second form of disease, where there is deep-seated ulceration, the whole formative structure of the hair is implicated, and all hope of the hair is lost, if the disease is not speedily arrested during its active stage.

Another accidental cause of the loss of the hair may arise from semi-infectious disorders, chiefly confined to children, although the impression is frequently conveyed to adult life, causing the loss of the hair from the taint imparted by the early affection.

The most common of infectious disorders, is that disease termed *crusta lactea*, or milk crust. This usually affects young children,

first commencing with circumscribed patches of inflammation, upon which accumulate yellow scurf, being brought on either by contact with one already suffering from the disease in its ulcerative stage, or by a lack of cleanly protection. In the inflammatory stage, they are excessively annoying, from intense itching, and when the surface of the skin is broken by the nails, or by other means, a thin viscous matter exudes; and, by being brought in contact with the adjoining parts, the disease is spread. If a large portion of the scalp be implicated, the affection becomes deeply seated; and, if the covering be broken, the secretion gives forth an offensive odor. At this stage, pediculi are generated in great numbers, causing the hair to fall with the crust. The treatment of this disease should be intrusted, in the early stage, to a skilful physician; and, as soon as he succeeds in restoring the tone of the integument, active measures ought to be taken for the restoration of the hair.

Treatment directed for the reproduction of hair should be based upon the character of the disease that destroyed it. If of a mild description, the more active course should be premised,—with cool, emollient, and sedative applications,—combined with the vapor or cold bath, as the peculiarities of the case may warrant. Like deep-seated erysipelatous affections, the more virulent forms of this disease are not susceptible of successful treatment.

We will now conclude with a description of that form of disease technically termed *charact*, where the decay and fall of the hair occur in a diffused or limited manner, gradually becoming thinner, at first on the crown, extending to the forehead and temples. Decay of the hair may take place from the variety of causes existing under this division, either suddenly from a particular spot, or it may progress gradually, and become generally diffused. Among

the causes the most prominent may be reckoned, disorders of the digestive organs, constitutional defects, and local affections of the scalp extending to the fibrous follicles. When subject to premature loss from gradual decay, it generally arises from exhaustion of organic nervous energy. In senile baldness, or that of old age, we find that the hair falls, like autumnal leaves, for the season of vitality has passed. The yearly growth of the tree, in its almost numberless varieties, corresponds, and is correctly typical of the existence of man, under the influence of organic and constitutional temperament, which change and accord with their vegetable prototypes. As the tree buds and blossoms, and puts on its choicest beauty in early spring, boyhood may be considered the spring time of life; bearing the fruit of wisdom in middle age, unless of barren stock; anon the sear of autumnal age leaves the parent stock bereft of organic vigor, "sans teeth, sight and hair," and all the external beauties which serve to make life attractive. Then comes the winter of our brief sojourn in life, cold with the frosts of age gathering thick upon our leafless branches; with nought to cheer but the joyous smiles of youth, offspring from the parent stock, and the soothing reflections derived from a well-spent and useful life.

But, to our subject:—the causes which serve to prematurely lower the standard of healthy energy, may be enumerated as follows: dangerous hemorrhages; low typhoid fevers; care; disappointments; the depressing passions, and anxiety of mind; excessive application to study; the contact of rancid, septic, or putrid animal substances to the scalp; frequent or prolonged use of mercury; irritation which shall give rise to inflammation of the scalp.

The fall of the hair from these causes may take place suddenly in a few days; or, it may continue for a long time, and progress so

slowly as to be scarcely perceptible. But the integument will always be certain to convey a sensation, which, if observed, must surely lead to the detection of disease. If the cause give rise to premature loss, sure indications of the character of the disease may be found by a close inspection of the part from which the sensation is derived. But, if it exists in combination with the exhaustion of the vital functions common to old age, the transition is so gradual as to be scarcely detected. Baldness does not usually make its appearance, even with a hereditary predisposition, until after the period of adult age, and is much less liable to occur in females than in males; for which fact an apparent reason exists, notwithstanding the practice which universally pertains to the sex of wearing the hair long, requiring the full exercise of nutritive energy devoted to that purpose. The premonitory symptoms which usually indicate the inroads of disease, when premature, exhibit to the sight, in the appearance of the scalp, a growing paleness, or rather, a dead whitish color; and, upon rubbing the surface of the scalp, scales, or what is usually denominated "scurf," can be readily raised. If simple paleness be the only indication of disease apparent to the eye, its sensibility may not be seriously impaired. But, if there has been inflammation sufficient to give the scalp a scaly surface, the integument must evolve undue heat, perceptible to the touch, and convey an itching sensation to the sufferer; or, when brought in contact with other substances, produces a sensation like nettle-rash, although less severe. The hair itself, under the effect of these causes, is more or less influenced, according to the physical powers of resistance bestowed in the organization of the scalp and subcutaneous structure.

Before it is sufficiently diseased to fall out, it becomes dry and

harsh, without lustre, and greatly changed in color. But this change in structure frequently proceeds from an infectious source, and propagated by the contagious influence conveyed through the medium of a comb or brush in common use. All the diseases that eventuate in the destruction of hair, act either directly or indirectly by changing the hair bulbs. If the affection be caused by the depressing passions, producing atrophy or wasting of the follicles, or that produced by old age, a long process of stimulating and tonic treatment must be persisted in. If from impaired or suspended vital energy, derived from some other cause, which destroys suddenly, in a few months, (as from intense mental emotion, typhoid fevers, etc.,) the chance of recovery is sure under the influence of proper remedies. It is in every instance important to have correct judgment, based upon absolute knowledge of the particular condition of the follicles and hair bulbs.

As all diseases that result in the loss of the hair must act directly upon the formative and nutritive structure, correct knowledge of curative remedies can only be obtained by a careful investigation of the laws which originate and support its growth. As in diseases affecting other organs of the system, the cause, whether remote or proximate, should be learned in all its bearings. And treatment should never be attempted, except by a person qualified first by anatomical research, and the right appreciation of the requirements to be answered for the removal of the first cause. For, if substances be applied without understanding the nature of the disease to be removed, or the stage of its progress, the probability would be, that the symptoms would be subject, from the effect, to great aggravation.

As the various forms of disease which I have mentioned are in

effect strictly local, although they may have been primarily induced by derangement of the digestive organs, or from a lack of nervous energy thus engendered, the application of remedies should be mainly directed to obviate the *EFFECT of the original cause*. But, advantage may be derived from a combination of treatment, should there be functional derangement of any organ of the system still existing, as everything that tends to impede the healthy display of organic power in the preparation of nutriment, must of necessity impair the supply of remote appendages.

But, as our time is nearly exhausted, we will defer a description of particular diseases of the hair, with the remedies used for their removal, to a future discourse or treatise; and close with the prophylactic or preventive method to be adopted for the protection of the hair in a healthy state. As the proverb has it—"Prevention is better than cure." Like other portions of the body, the head should be kept perfectly clean. This cannot be accomplished with advantage to the hair, unless great care be observed in the process. According to Whitof, the thickness of black hair may be averaged, in a healthy state, as a shaft to every $\frac{1}{8}\frac{1}{2}$ of an inch; that of brown hair, $\frac{1}{8}\frac{1}{8}$ of an inch; while that of blonde was only $\frac{1}{7}\frac{1}{10}$ of an inch apart. In this variation in the thickness of hair, we are enabled to discover a wise provision of Providence, as one shade of color, although less thick, serves equally with the thicker varieties, to cover the head.

But from this covering, the process of washing is rendered more difficult, as, under the ordinary method, there would be certain danger of inflicting injury, to mar the beauty and permanency of the hair. While other parts of the body present a smooth surface, which allows the secretions, as they pass from the pores, to be

readily removed by the action of water and the friction of the napkin, in combination with its absorbing properties — the hair prevents the secretions of the head from being removed, except under the influence of extraordinary effort. Aside from the difficulty attending the washing of the head, the hair, if thick, affords a covert for the accumulation of dust, and other foreign substances. These prove a source of irritation, and are often the sole origin of disease, which eventuates in the loss of this valuable appendage. And should the removal of these accumulations be attempted in the ordinary way, by washing, ten chances to one there would be another cause added to those already existing, to the detriment of the hair.

The practice of washing the head should be instituted from early youth, under the following provisions. The head of the child should be rubbed with a wet sponge, gently at first, but the force must be increased with its strength. If the formative process be tardy, light brushing would prove a beneficial aid to hasten its growth. With the use of water upon the head of the child, great care must be bestowed in wiping the surface perfectly dry—as, from the water, in combination with the secretions, an adhesive compound would be formed, which would be likely to retain light substances brought in contact. These would prove a source of irritation to the scalp, and the origin of those forms of disease to which children are so peculiarly susceptible.

Washing the head should be continued, with the drying precaution, through life. And if, at any time, there arise indications of acute febrile disease, the hair should be cut short, in the first instance, and the sponge and napkin frequently employed. During the sickness, the free ends of the hair may, with advantage, be trimmed often.

The object to be obtained through the drying process is, to prevent the creation of vapor from the heat evolved from the integument, which often causes inflammation, and makes the process of washing rather add to, than diminish, the tendency to disease.

After fever, slight stimulation should be practised upon the surface of the integument with a brush, in connection with the application of a mild tonic. But every combination which retains in its composition oily or fatty substances, should be withheld—as they have been sufficiently tested to prove them incompatible with a healthy condition of the hair at any period, or in any existing form of disease. Many of the compounds now in use for beautifying the hair, are composed of fixed oils and marrow, which differ but slightly from other fatty substances. These are sometimes combined with essential oils, but are more frequently decomposed by alkalis, and suspended in brandy, or other astringent spirits. But if those who now possess healthy heads of hair have a desire to preserve them in that state, and render the surface glossy, let them rely solely upon water, observing strictly the precautions which have been dictated upon the strength and test of long experience. Cleanliness is an essential attribute of order, and must go hand in hand as the first law of our nature.

The safety of healthy hair can only be warranted by a strict observance of the above regulations.



