

cesses causing impairment of bodily vigor. Affections which exceptionally are succeeded by a rapid, copious, but usually well-recovered defluvium capillorum—for instance, syphilis, a grave typhoid fever, an irregular puerperium, mental disease with prevailing melancholia—are much more frequently followed by the onset of an alopecia pityrodes capillitii distinguished by a rapid transition into the second stage. The hair affection supervening in the later stages of tuberculosis, carcinosis, and other processes leading to general cachexia, has all the characters of alopecia pityrodes. In the female sex, the disease now under consideration frequently forms a sequel of simple chlorosis.

The view of Hebra-Kaposi that a chronic seborrhœa is always the primary condition and that the alopecia occurs only secondarily, has in our opinion been disproved by Pincus. Both processes are parallel effects of the same cause; the branny desquamation of the scalp, the symptom of an "atrophy of cornification," is based on abnormal constitution or local nutrient conditions in the same way as the nutritive anomaly of the hair formation, the analogue of horn production (Auspitz).

Owing to the conformity with districts of peripheral nerve expansions generally exhibited by the baldness in the male, some authors¹ took occasion to suggest that the loss of hair both in alopecia senilis and in the various forms of premature alopecia might be preceded by the death of peripheral nerve twigs. For the present this attempt at explanation lacks every anatomical basis.

Lassar and Bishop (l. c.) have lately asserted, basing their opinion on experiments with animals, that "alopecia præmatura" could be caused by contagion.

Treatment.—The therapeutic measures formerly in use were directed solely against that stage of the disease in which a clearing of the scalp already indicated the impending termination in baldness. Among the number of medicaments² recommended, we can distinguish three categories; either a medication was attempted which should act alteratively upon the deeper layers of the cutis, by strong irritation of the upper layers (caustic soaps, etc.); or one which was to have an astringent and, vaguely, roborant effect on the entire skin (tannin, quinine); or, finally, irritating drugs were employed which had the reputation of possessing as specific influence on the development of hair (veratrine, tincture of cantharides).

But, as has been stated above, it is precisely the treatment of the first stage of the disease which offers the best prospect of success. Unfortunately, professional advice is rarely sought for chronic pityriasis capitis. For this stage Pincus believes only those agents to be appropriate which excite a very mild irritation on the skin; he had the most favorable results by the employment of sodium bicarbonate.

The concentration of the mixture must be specially determined for every patient; it is diluted until, when rubbed for several minutes into the forehead of the patient, it produces neither reddening nor even slight burning. The dose may be gradually increased. In order to keep the solution in long and intimate contact with the scalp, it is necessary to pour it over the latter in the evening, and during the night apply a compress well saturated with the fluid, protected by a cap of impervious cloth (gutta-percha tissue, oiled silk).

A disagreeable incidental effect of sodium bicarbonate is that the color of the hair acquires an admixture of dirty reddish-brown which takes place especially early and with greatest intensity in the case of dark hair.

Martineau employs a five-per-cent watery solution of chloral hydrate. Two table-spoonfuls are warmed and then rubbed into the scalp with a sponge. The desquamation

¹ Comp., for instance, O. Simon, "Localization d. Hautkrankh.," p. 87, Berlin, 1873.

² Comp. Pincus, l. c., 4, p. 310.

can likewise be removed by ablutions with weak solutions of corrosive sublimate (Sol. Hydrarg. bichlor. corros., 0.5 : 150; Glycerini, Spirit. Colon., aa 75 Lassar).

In the second stage Pincus succeeded in keeping the affection in abeyance for a space of several years by two remedies, viz., tannin and oil of savin.

The tannin ointments employed contained 5 grams to 30 grams of fat; two or three times a week during the use of this salve the head was cleansed with a dense soft brush dipped in warm soap-suds. Still more effective than tannin was oil of savin (in alcoholic solution, 5–30 drops in 30 grams), but during its employment such serious drawbacks manifested themselves (increased brittleness of the hair, dirty grayish or brownish discoloration of the epidermis, but especially a penetrating odor, headache, nausea, etc.) that it could only exceptionally be utilized.

In more recent times a method of treatment has been introduced which fulfils numerous indications in both stages of alopecia pityrodes. Its effectiveness rests on the following three factors: 1. The scales and fat are thoroughly removed from the scalp. 2. The circulation of blood and the activity of the cutaneous muscles is stimulated. 3. Pure fat is brought to the skin from without. Hereby are indicated at the same time the three parts into which the method of treatment is divided. A flannel rag moistened with lukewarm water is saturated with a sufficient quantity of spirituous soap (for instance, a solution of good glycerin soap in spirit of wine, equal parts; or a filtered solution of two parts of potash soap in one part of alcohol—spiritus saponat. kalin. Hebræ), and the scalp thoroughly washed by means of this rag. Then an irrigator, provided with a small spout, is suspended about one metre above the patient's head, and first one-half litre of lukewarm, then one to one and a half litres of cold water are allowed to fall upon the head. The head is carefully dried with a rough towel, and finally—only after several hours if the hair be still somewhat dense—the scalp is thoroughly saturated with pure olive oil.

According to the degree of pityriasis, the procedure should be employed every day, or we may order the whole process only for two or three days in the week, for the other days a curtailed modification restricted to irrigation with succeeding oiling. The patient's attention is to be called to the fact that the loss of hair at first is apparently increased, as the already loosened hairs are removed completely in the first days of treatment.

In order to exert a more vigorous cutaneous irritation in the second stage of the disease, it will suffice to add to the spirituous glycerin soap, table salt to saturation—about four per cent are dissolved—or to rub the scalp previous to the oiling with a rag dipped in salt water.

NOTE.—The favorable influence of sodium chloride on the growth of hair has been demonstrated experimentally by Pincus.¹

Of other medications recently recommended the pilocarpine treatment should first be mentioned.

The action of muriate of pilocarpine on the growth of hair was accidentally discovered by Schmitz, who saw new hairs develop on the bald spot in two persons to whom some subcutaneous injections of pilocarpine had been given for other reasons. Schueller² confirmed Schmitz's statements from experiments on animals; and Pick gained the conviction, from the improvement obtained in ten cases of alopecia pityrodes, that, "where the disease has not reached a high degree and does not rest on hereditary basis, the pilocarpine treatment is capable of producing permanent results."

¹ L. c., No. 4, p. 308.

² Arch. f. experiment. Pathologie, etc., Bd. xi., pp. 88 and 89. 1879.

The remedy is best employed in the form of subcutaneous injections twice a week. The dose for each is about 0.005 to 0.010 gram. For internal use 0.005 to 0.010 gram is ordered once or twice daily (Pick).

The pomade introduced into the market by Demarson-Chatelet & Cie., of Paris, under the name of "La Philodermine, pommade antipelluculaire," has acquired a certain reputation in lay circles. The chemical examination made at my instigation by Mr. Gaebler showed that sulphur was the chief ingredient. Krause's analysis showed that it also contained small quantities of iron oxide and magnesia.

About six years ago, in a case of alopecia pityrodes under Unna's observation, considerable improvement was secured by the employment of this pomade. Unna has since then employed an ordinary sulphur ointment, for instance :

Sulph. præcip.,	3 grams.
Adipis (ungt. pomadin.),	30 grams.
M. ft. pomade,	

in all cases of so-called pityriasis capitis, *i. e.*, alopecia pityrodes incipiens, coming under his care, and gained the conviction "that all cases were greatly improved in a short time, and completely cured when its use was continued for a long time."

Unna has the hair parted every evening first in a sagittal, then in a coronal direction at intervals of about one centimetre, and the sulphur ointment lightly rubbed in along these lines. Every third or fourth evening the head is previously cleansed of the remnants of the old ointment. As soon as the desquamation decreases markedly, differing, according to the intensity of the case, from the second day to at most a week, the inunction is performed every other evening only. Should the results continue equally good, only two weekly inunctions are given in the third and fourth weeks, then for one to two months but one per week, thus gradually stopping entirely.

By the use of this sulphur inunction treatment of Unna's, cure of alopecia pityrodes is said to be secured not only in the first stage, but even when considerable thinning of the hair has already occurred.

Finally it should be pointed out that in treating alopecia pityrodes, any other indications derived from the general constitution of the body must be most carefully met.

In Kaposi's "Pathologie und Therapie der Hautkrankheiten"¹ we find the statement that at times "the alopecia progressing with seborrhœa" simultaneously or exclusively affects the eyebrows or the beard. Such cases I have also repeatedly seen.

In one of my colleagues suffering from alopecia pityrodes of an hereditary character from his twentieth year, there was present from the beginning to the present day (patient is now thirty years old, the clearing of the central portion of the scalp is already quite distinct, no adequate treatment has ever been employed) a very great desquamation of fatty scales. When in 1874 he allowed his beard to grow, he noticed that a flaking off similar to that of the scalp took place in the side whiskers and the goatee. After the beard was shaved off, the pityriasis barbæ diminished.

Probably these cases represent a transition to the rare disease for which I would propose the term

b. Alopecia Pityrodes Universalis.

The development of this form of alopecia is exceedingly violent. Setting in with and accompanied by abundant desquamation of fatty scales, there ensues within a very

¹ Vienna, 1880, p. 568.

short time a material thinning of the hair of the scalp. Synchronously or subsequently the same symptoms occur on other parts; when the disease is at its height, the body is deprived of the greater part of its hair. Inasmuch as definite centres may now be clearly recognized where a much greater loss of hair has taken place than elsewhere, the group of symptoms presents a strong resemblance to the malignant form of alopecia areata (comp. below). More thorough examination, however, shows that even the parts most affected are in no stage of the disease completely bald, but covered with fine, colorless, lanugo-like hairs, or that at least rudiments of hair are present in the follicles; furthermore the transition to the vigorous hair of the periphery is not sudden, but gradual. Those regions of the scalp for which the ordinary form of alopecia pityrodes exhibits a predilection are, it seems, attacked also by alopecia pityrodes universalis soonest and with special violence. As opposed to alopecia areata, the skin in alopecia pityrodes universalis is not thinned, not displaceable on the underlying tissue with abnormal facility, and is folded with greater difficulty; it has a fatty feel, is covered with scales as a rule, and the openings of the hair-follicles can be easily recognized.

With reference to etiology, debilitating influences seem to be of importance. The following case shows that even the almost total defluvium capillorum exceptionally developing after exhausting general diseases may present the character of alopecia pityrodes universalis sketched above.

Dg., silver-worker, of vigorous build, acquired a hard chancre in November, 1879. Was put on a course of inunctions from December, 1879, to January, 1880. Patient states that quite suddenly, between the 27th and 30th December of 1881, a quantity of hair fell in bunches out of his full, reddish beard; soon after, the scalp began to be very rapidly depilated. When the patient first presented himself to me on the 21st of February, 1881, he stated that he had lost much flesh within the last few weeks and felt weak. The character of the alopecia, which had attacked also the genital and axillary hairs, completely corresponded to the highest degree of alopecia pityrodes universalis. On parts of the skin which appeared bald, the mouths of the follicles were partly studded with lanugo, partly with dark points, which were difficult to interpret microscopically; wherever the latter condition obtained, a comedo-like body could be squeezed by lateral pressure out of the hair-sac, which, under the microscope, proved to be a rudiment of hair. Examination further showed the cause of a pronounced fetor ex ore to be the presence of a discolored deposit on the gums (the patient was largely employed in gilding, and thus forced to inhale mercurial fumes). Treatment: Saline baths, rinsing of the mouth with potassium chlorate solution, inhalation of salt-water vapors from an apparatus; roborant diet. After a few months (beginning of May) the hair commenced to grow again; in July the growth was already completely restored, and has continued normal to the present time. The new-growth on the scalp is altogether dark blond, while the former hair was reddish. The moustache preserved its previous reddish blond color, but the chin and side whiskers had reappeared in lighter (blond) color than before and continued so.

The results of the microscopic examination of epilated hairs give as little information in alopecia pityrodes universalis about the cause of the atrophy as they do in most other forms of alopecia.

Of the rarer alterations, the hair rudiments found in the above-detailed case should be first described. The degenerated hair-shaft, as represented in Fig. 3, consisted chiefly of soft, multinuclear, strongly pigmented tissue, similar to that found normally only in the immediate neighborhood of the bulb of freshly vegetating hair. In the portion of the rudiment next to the surface of the skin the cells seemed to have been transformed into cortical scales, but their coherence was abnormally loose, presenting a brush-like appearance. The inappropriate or insufficient nutriment supplied to the matrix, therefore, had not caused a complete interruption of the hair production, but merely led to

an incomplete cornification of the cellular elements obviously furnished in insufficient number by the papilla, and to a defective secretion of cement substance.

In another case of alopecia pityrodes universalis, the finest lanugo-like hairs, taken from the spot most affected by the disease, showed themselves almost without exception provided with a well-developed medullary cylinder. The occiput of the patient in question was still densely covered with apparently vigorous hairs. When some of these were

withdrawn with tweezers, which succeeded with the lightest traction, almost the whole of the root-sheath followed, not rarely also the homogeneous membrane of the hair-sac. On the external root-sheath the symptoms of pathological cornification could often be perceived.¹

Alopecia pityrodes universalis has a generally good prognosis. *Treatment.*—Saline baths, roborant medication and diet; besides, in the case of strong desquamation of the scalp, ablutions with spirituous soaps, chloral hydrate, or weak solutions of corrosive sublimate, douches.

ALOPECIA SIMPLEX.

Cases of loss of hair occur exceptionally which otherwise resemble alopecia pityrodes capillitii, but lack the morbid desquamation of the epidermis and the increased secretion of qualitatively altered masses of sebum. For these cases we accept the above title chosen by Pincus.

ALOPECIA AREATA.

Symptoms and Course.—By the term alopecia areata we understand that affection of the hairy skin in which there occurs first a loosening, then a total loss of hair on chiefly roundish, rather sharply demarcated, gradually peripherally enlarging and finally confluent patches, without the skin in the mean time showing any obvious alterations.

In the milder (benign) cases the loss of hair is confined to isolated portions of the scalp or beard; in the graver (malignant) cases, it may extend to all parts of the skin covered with hair.

Alopecia areata is relatively rare. It attacks preferably youthful persons, but may develop also in those of riper age. There are no statistics relative to the frequency of occurrence in the two sexes; according to the writer's experience, patchy baldness appears to be more frequent in the male sex than in the female.

The initial stage of the disease is accompanied in many cases by a distinct influence on the general health, manifesting itself by headache, loss of appetite, lassitude, and emaciation. Headache is com-

plained of with special frequency and, if the affection is unilateral, has its seat at times mainly in the corresponding half of the head. Various paræsthesiæ occasionally appear as precursors and likewise remain confined to the affected area and its immediate surroundings (itching, evanescent sensations of heat often associated with annoying pricking, pain with the slightest pull on the hair, etc.).

¹ See further details in Monatshefte f. pract. Dermatol., 1882, No. 4.

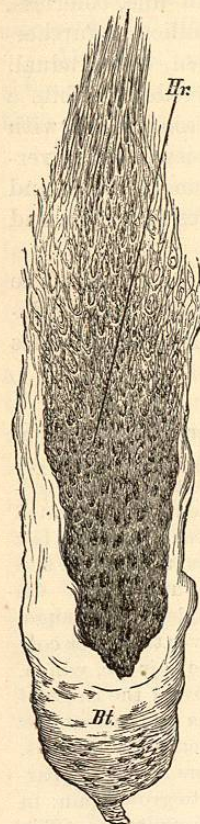


FIG. 28.—Hair rudiment from the scalp of a man suffering from alopecia pityrodes universalis. Hr., hair rudiment (described in the text). Bl., part of the internal investment of the hair-follicle. 240 diam.

The affected skin is free from vesicles, crusts, or scales. At first it is almost completely devoid of hair; the few perhaps still remaining differ neither in circumference nor other aspects from the surrounding, apparently intact hairs of the marginal zone. By careful inspection we often discover isolated stumps of hair broken off close above the level of the skin. The mouths of the hair-follicles in the beginning are still distinct, but gradually collapse more and more, and at the height of the malignant form they appear as the most minute punctiform depressions which can be found with difficulty by the unaided eye. In the grave cases the skin is pale and anæmic from the start, and reddens but slightly on irritation. Moreover, it is thinned—a symptom which becomes more and more unmistakable with the progress of the disease—its panniculus adiposus is defectively developed, and it may be displaced on its bony base with abnormal facility, and frequently appears somewhat depressed.¹

In all of my patients, I found the cutaneous sensibility of the diseased skin intact, at times even increased.

The scalp at the periphery of the spots—which are usually roundish, at times rather oval or irregular, and expand always circumferentially, never radially—as long as the disease has not come to a standstill, is already pretty well thinned, and for some distance, corresponding to the rapidity of the development, covered with hairs sticking but loosely in their follicles. But these hairs have still a perfectly normal diameter, and their cohesion is but very slightly diminished.

It has already been intimated that in the benign form the higher degrees of the above-described cutaneous atrophy on the whole are more rarely observed. Nor does the complete baldness here continue long; as a rule the loss is soon followed by an after-

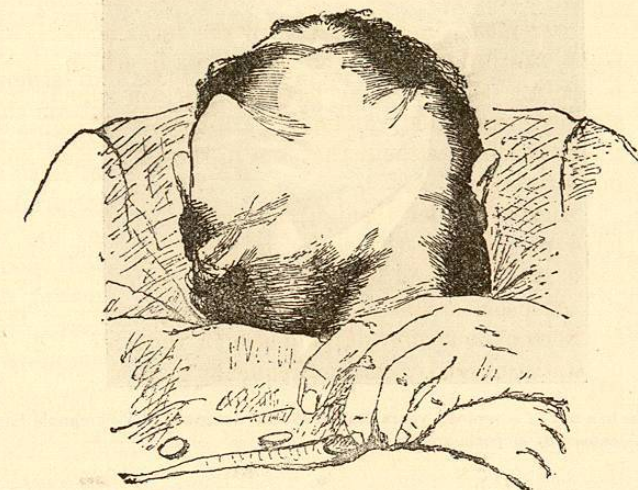


FIG. 29.—Alopecia areata. Form of baldness due to the confluence of several areas. The drawing is that of a man of thirty-five who became affected about the end of 1880, put himself under treatment on January 19th, 1881, and was discharged cured in September, 1882.

growth of very short, thin, and faintly colored hairs. In the course of time these "fillers" are replaced by more substantial hairs of the same quality as the original; at times, however, this takes place only after the new-formed, loosely inserted lanugo had

¹ According to Hutchinson (l. c.), the last-named symptom becomes more marked when the surrounding healthy skin is shaved.

reached a certain length and then had likewise fallen. Such abortive attempts at regeneration may even be repeated several times in the course of months or years. It may happen, too, that while the growth of hair on the portions first affected is definitely increasing, the hairs of other regions are beginning to fall, and such an interrupted progress permits us to demonstrate different stages of the affection.

In the malignant form the course proceeds as follows: At the very beginning several centres of loss of hair are observed on the scalp or in the region of the beard (more frequently the former); they steadily enlarge without any intercurrent attempts at restitution. At this period of the development the above-mentioned general symptoms set in. The continual progress of the bald spots gradually consumes the remaining ridges of hair which separate the several areas, thus producing the characteristic dumb-bell and trefoil forms of baldness represented in Fig. 29. However, the loss of hair is not confined to the scalp or beard, but may successively or simultaneously affect both, and in time but few small groups of vigorous hair can still be found. At the acme of the disease, the eye lashes and brows, the axillæ and the genitals, at times even the hairs of the extremities are involved in the affection. Many patients complain of frequent chills.

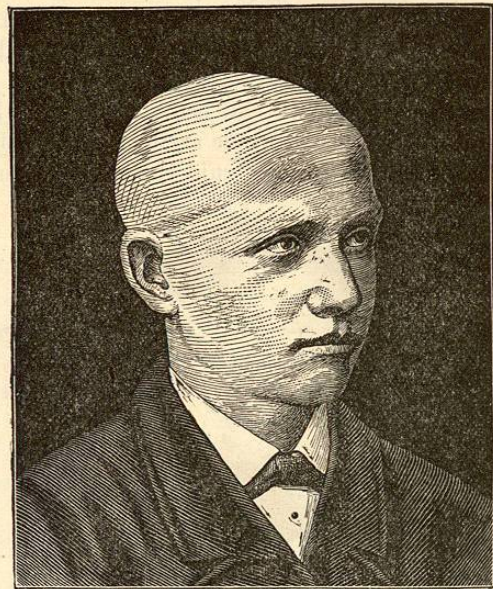


FIG. 30.—Total baldness in a boy of seventeen years (Rudolf Woelk, described in Volkmann's Sammlung klin. Vorträge, No. 120, pp. 7 et seq.), caused by alopecia areata.

The scanty eye lashes and brows give to the eye a strikingly free, bold expression. Hereby, as well as by the delicate skin of the face and the strong prominence of the facial bones due to the defective development of the subcutaneous fat, is produced the peculiar type which gives to these patients a certain family resemblance. The patients are perpetually reminded of their bodily defect by the unwelcome attention they attract among strangers, and it cannot surprise us that their frame of mind is greatly depressed.

The recovery in these grave cases proceeds very gradually. Close to the few groups of vigorous hairs still present there spring up, anywhere in the midst of the bald spots

or those covered with delicate lanugo, new small islands of closely aggregated, firmly embedded, normally pigmented and normally thick hair. In the course of time, more of these islands develop. A gradual enlargement of these oases leads to the confluence of their lateral borders, whole ridges of hair appearing anew on the bald surfaces; at first they present themselves in approximately arc-like segments, which again extending toward one another unite into almost circular forms. Where the several curves have a considerable extent, new bridges of hair branch off from them at an obtuse angle, and in turn surround, in an analogous manner, surfaces of smaller diameter within the large bald patches. The same process takes place simultaneously on several portions of the depilated skin, and by continual broadening of the marginal ridges from the periphery toward the centre the circumference of the bald or lanugo-covered areas by the encroachment of those provided with more vigorous hairs becomes ever narrower until recovery is finally complete. During this stage of the recovery, the limp quality of the morbid skin is gradually lost.

Diagnosis.—The losses of hair due to trichomycosis circinata are largely confounded with the patchy baldness from alopecia areata.

It may be admitted that after the inflammatory process caused by the vegetable parasites has run its course, a form of circumscribed baldness may exceptionally develop in mycosis circinata which resembles that due to the benign alopecia areata. In such a case the history of its development, or perhaps the presence of other portions of the skin affected by the disease in a less advanced stage, will confirm the diagnosis. As long as the fungous vegetation continues, trichomycosis tonsurans s. circinata is very well characterized, independent of the microscopic appearances, by the dermatitic symptoms and the general fracture of the hair close above the level of the skin. The frequent mistakes can be understood only if we bear in mind the unfortunate confusion still existing in the nomenclature.

The differential diagnosis between alopecia pityrodes universalis and the malignant form of alopecia areata has been discussed above.

Prognosis.—Recovery may take place even in the gravest cases. For instance, the patient by the name of Sohlf described by me (l. c.)¹—he had suffered from symptoms of the malignant form for about sixteen years—writes me that he regained his full growth of hair about two years ago, and I have just received information from Dr. Freymuth, of Danzig, that even our patient Diekert² again rejoices in an almost normal growth of hair for some months past. The latter, now 48 years old, had been nearly entirely bald in consequence of alopecia areata since childhood. Still for those suffering from the malignant form restitution cannot be prognosticated with absolute certainty, and at all events a considerable space of time, usually several years, always elapses until the hair is completely recovered.

The cases to be classed as benign usually recover after several months, at most after a year; very few of them have a tendency to relapse. In the beginning it is necessary to be very reserved regarding the prognosis, for only the subsequent course will show whether the cases will assume the malignant character or not. The former is more probable should the general health be greatly implicated, the circumference of the bald spots rapidly increase without intermittent lanugo formation, and the signs of cutaneous atrophy set in early.

¹ Volkmann's Samml., No. 120, p. 10.

² Ibid., pp. 6 and 7.