

## LICHEN PLANUS ET ACUMINATUS ATROPHICANS

LICHEN PLAN ATROPHICUS, LICHEN PLAN SCLEREUX, HALLOPEAU;  
LICHEN RUBER PLANUS KELOIDIFORMIS, PAWLOW; LICHEN  
PLANUS MORPHOEICUS, CROCKER; LICHEN ALBUS, ZUMBUSH \*

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It has been my good fortune to be able to report this extremely rare and interesting case. The rarity of the disease and the multiform character of the lesions are of sufficient interest in themselves. In addition, the case serves as a corroboration to one of the conclusions reached in a previous article,<sup>1</sup> namely, that lichen planus and lichen acuminatus are closely related to one another. One of the arguments on which this conclusion is based is the comparative frequency with which the two diseases occur at the same time in the same person.

There are a number of cases on record that have points in common with this one, but after diligently searching the records, I fail to find a single case that corresponds to it in all particulars.

Dermatology is extremely rich in names. The rarer diseases especially have each been described under several headings. Many writers believe that they are describing diseases hitherto unknown and coin new names for them. For that reason I hesitate before giving this article its title, which expresses briefly the clinical and pathologic findings of the case, and I hope that, some day, this group of rare cases will be properly classified. The case is one of the rare modifications of lichen, namely, the atrophic form, with the difference that, to the lesions of atrophic lichen planus (Hallopeau) are added those of lichen acuminatus.

There is a certain degree of confusion in the meager literature of lichen atrophicus.<sup>2</sup> There are a number of cases reported in which the lesion consists of an atrophic central patch with a pink, red, violaceous, or brown border. In others, the central patch is white, hard, and parchment-like, while in still others the skin, although depigmented, is

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1. Feldman: Lichen Acuminatus, *J. Cutan. Dis.* **37**:226 (April) 1919.

2. A complete bibliography of the literature of lichen atrophicus up to the year 1910 will be found in Ormsby's article, Lichen Planus Sclerosus et Atrophicus (Hallopeau), *J. A. M. A.* **55**:901 (Sept. 10) 1910.

normal. Then, again, there are cases on record in which the lesion is a papule as large as a pinhead or a pea, pale or white, flat and angular, or raised and globular, rounded or irregular, with or without a pink or a red border. The papules in these cases are described as possessing one or more horny plugs, comedo-like bodies, or dilated follicles, while others lack them entirely. Some cases, with lesions widely differing from one another, have been described under one name, while similar cases have been described under a long list of different names.

#### HISTORICAL

Morand Baker had a case, in 1882, in which the papules were white and were surrounded by fine blood vessels. At times they had a linear arrangement. When they were grouped, the surface looked wrinkled.

Hallopeau reported four cases, the first in 1887.<sup>3</sup> In this case there were white shiny papules and patches, with deep central depressions representing dilated follicles and sweat gland ducts. The patches formed were white, shiny, scar-like, and itching. He, at first, named the condition lichen atrophicus, but after the pathologic findings of Darier<sup>4</sup>—atrophy of the papillae, fibrosis and infiltration of the corium, and dilated follicles and sweat gland ducts—he renamed it lichen sclereux when he reported his next case, in 1889.<sup>5</sup> In this patient the papules were white from the start, and Hallopeau, therefore, thought that this condition was not a modification of lichen planus, but an entirely new disease. He, however, modified this view, when, in 1896, he reported his third case,<sup>6</sup> in which distinct and typical lichen planus papules were present, as well as distinct lichen planus lesions in the mouth. He then came to regard this condition as one of the variations of lichen planus. The young lesions, in this case, were pale papules and patches with rose-colored or violaceous borders resembling morphea. The older lesions were large, depigmented patches with a pigmented zone at the periphery of each and with outlying typical lichen planus papules. One of the patches was exceptionally large, its dimensions being 34 by 17 mm. ( $1\frac{1}{3}$  by  $\frac{2}{3}$  inches). There were also papules that resembled the ones described, but they had pale centers with central depressions or comedo-like bodies. The fourth case was reported in 1898.<sup>7</sup>

3. Hallopeau: Lichen plan atrophique, *Union Med.*, 1887.

4. Darier: Lichen plan sclereux, *Ann. de dermat. et syph.* 1892, p. 833.

5. Hallopeau: Lichen plan sclereux, *Ann. de dermat. et syph.* 1889, p. 447.

6. Hallopeau: Sur un nouveau de lichen plan sclereux, *Ann. de dermat. et syph.*, 1896, p. 57.

7. Hallopeau: Sun un nouveaux cas de lichen Wilson sclereux, *Ann. de dermat. et syph.*, 1898, p. 358.

Zarubin<sup>8</sup> reported two cases. In one there were sharply outlined annular patches, also segments of rings and straight lines. They were slightly infiltrated and reddish-brown in color. There was a slight scaliness on the surface. The central patch within the annular lesion was made up of rose-colored papules confluent into a patch with depigmentation and real atrophy. Typical lichen planus lesions were found at the periphery. In the second case, the annular and serpiginous patches were red to reddish-brown, raised from the surface and infiltrated. The surface was waxy and shiny, and was thrown into folds. The central patch was white and atrophic and even scar-like. The outline of the individual papule was retained in the central patch in the form of a network. There were typical lichen planus lesions at the periphery, as well as white and shiny patches on the buccal mucosa.

Schwimmer's case,<sup>9</sup> reported in 1895, had the appearance of a generalized eczema, and only after careful searching lichen planus papules with horny plugs and comedo-like bodies were found.

In Crocker's case,<sup>10</sup> the papules were white, hard, flat, and angular, with a little pit or comedo-like body in the center. They were surrounded by a lilac rim, like morphea. Crocker states that the papules may run together to form a patch, but the outline of the individual papule is never lost.

Hoffman<sup>11</sup> reports a case in which there were large depigmented patches surrounded by a narrow, reddish rim with outlying small papules. The center of each papule was pale and at times atrophic. It was covered with an adherent scale or it possessed a comedo-like body or a small pit which was occasionally pigmented. There were typical lichen planus papules in the vicinity of the lesions. The depigmented patch had a porcelain-like appearance. A similar case was reported by V. Zumbush,<sup>12</sup> and he named it lichen albus.

Csillag<sup>13</sup> describes a case in which the papules were pale violet-red or chalky white. They were round or polygonal, globular or flat, or even depressed, each with a depressed center and a reddish rim. In the patches formed, the individual papule was plainly distinguishable.

8. Zarubin: Ein Fall von Lichen atrophicus, *Arch. f. Dermat. u. Syph.* **51**: 306, 1900; Ueber atrophische und serpiginöse Formen der Lichen ruber planus, *Arch. f. Dermat. u. Syph.* **58**:323, 1901.

9. Schwimmer: Lichen ruber planus atrophicus, *Arch. f. Dermat. u. Syph.* **33**:451, 1895.

10. Crocker: Lichen Planus, Its Variations, Limitations and Imitations, *Brit. J. Dermat.* **12**:421.

11. Hoffman: Ueber einen mehrere Jahren hindurch beobachteten Fall von Lichen sclerosus, *Ikonog. Dermat. Fasc.* **4**:153.

12. V. Zumbush: Lichen albus, *Arch. f. Dermat. u. Syph.* **82**:339, 1906.

13. Csillag: Dermatitis lichenoides chronica atrophicans, *Ikonog. Dermat. Fasc.* **4**:147.

There was a pale violet rim around each patch. There were horny plugs and, in places, also thickly adherent scales. He was able to follow the development of the lesion and says that there is at first a red, conical papule with a horny plug. In some cases, the papule becomes pale, the plug falls out, and the papule disappears, leaving a brown pigmentation, while in others the papule becomes pale and centrally depressed. It enlarges and joins others to form a patch.

In Reiss' case,<sup>14</sup> there were vitiligo patches with horny plugs and little pits and the patches were surrounded by sepia brown borders. It is more than likely that these borders were originally patches of lichen planus which cleared up and left the deep pigmentation behind.

Ormsby, in 1910, reported a series of six cases,<sup>2</sup> one of which was a new one. In all these cases there were either white, flat papules with comedo-like bodies, some of which were surrounded by a pinkish border, or there were white, occasionally atrophic and depressed patches in which the outline of the original papule was retained. In two of the six cases there were typical lichen planus papules present and, in spite of that, Ormsby says that the papule is never red at the beginning, that the white papule is primary, and that the disease is not a modification of lichen planus, but an entirely different condition. His pathologic findings agree with those of Darier, except that he found the infiltration in the lower layer of the cutis instead of in the middle layer, as described by the latter author.

Riecke<sup>15</sup> thinks that the lesion may develop from either a white papule or a typical lichen papule. The patch formed is not always white; it may be gray, brownish or red.

Hallopeau and Laredde<sup>16</sup> collected and described a group of cases under the name of tropho neurose dyschromique et lichenoides. All cases in this group were not unlike those described under the name of lichen atrophicus. Some of them even had the same pathology; but they all lacked the horny plug or the dilated follicle. There were three types described: (1) The Neuser type, in which the pathologic findings are the same as in lichen planus, but the papules are strictly localized within the patch of vitiligo and the follicular dilatations are absent; (2) the Rille type, in which the papules look like lichen, but the vitiligo patch is partly atrophic, and Rille considers it an erythema with atrophy; (3) the Hallopeau and Larat type, in which there is a central depigmented patch with peripheral hyperpigmentation and lichenoid papules, but without horny plugs or dilated follicles.

14. Reiss: *Über atrophische Formen des Lichen planus*, Arch. f. Dermat. u. Syph. **68**:137, 1903.

15. Riecke: *Zur Kenntnis der Weissfleckenerkrankung*, Arch. f. Dermat. u. Syph. **99**:181, 1909.

16. Hallopeau and Laredde: *Traite pratique de Dermatologie*, Paris, 1900, p. 793.

*Pathology of the Depigmented Patch.*—There is a hyperkeratosis, but no parakeratosis. Horny plugs project into the follicle and into the sweat gland duct. The stratum lucidum is absent. The stratum granulosum may be normal (Darier), diminished (Reiss), or missing altogether (Zarubin). Stratum malpighii is diminished and may be missing altogether. The papillae are flattened or they may be completely missing near the center of the lesion. Near the periphery they may be enlarged. Darier divides the corium into three layers. In the upper layer the fibrous tissue predominates. The bundles are packed close to one another and the cellular element is sparsely present. According to Reiss and Zarubin, infiltration is present in this layer and may even reach the stratum malpighii. The capillaries are either dilated or blocked. The elastic fibers are very fine and few in number. The middle layer consists chiefly of infiltrate. The greatest number of cells, composing the infiltrate, are small lymphocytes. There are also a few plasma cells and an occasional mast cell. Many young fibroblasts are present. In the third layer, the infiltration is localized about the vessels and glands.

#### REPORT OF CASE

*History.*—Mrs. S. S., aged 45, who had been married eight years, but had never been pregnant, had had her menopause three years previously. About two years previously her husband disappeared from home and was found later wandering in a semidemented condition. His case was diagnosed as one of advanced paresis. In November, 1918, the patient began to experience an itching and burning sensation of the face and of both forearms. Within a month, little patches appeared on the forearms and on both sides of the face. A few weeks later, the patches in the former region became ring-shaped, with a more or less clear center. They gradually increased in size to about three quarters of an inch (1.9 cm.) in diameter. About Feb. 1, 1919, she went to a dispensary for treatment, and there her case was diagnosed as ringworm. She received one or two treatments, and then she was told not to call again, as the disease would surely disappear if she continued using, a little while longer, the salve that had been given to her. The lesions, instead of improving, became larger and the itching increased. The lesions began to spread upward, reaching the arms by the end of March, at which time the patient went to another dispensary. There her case was diagnosed as syphilis, presumably on the strength of her husband's paresis. No blood test was made, but she received antisyphilitic treatment, which consisted mainly of mercury injections. She also received three arsphenamin injections, the last one just before she left the dispensary in August. Had the treatment been reversed, that is, had the patient been treated mainly with arsphenamin injections, there might not have been anything left for me to report. In June, while the patient was excessively overheated, she experienced a furious itching of the neck and the upper portion of the chest and shoulders. She states that there was no change in the appearance of the skin for about two weeks, after which time little red "pimples" appeared on the neck, upper portion of the chest, shoulders and both arms. She began to feel weak, and states that she lost 15 pounds (6.8 kg.) during the time she received the antisyphilitic treatment. There

was no relief from the itching, except for a short time immediately after an arsphenamin treatment. The slight benefit derived from the treatment was counterbalanced by reactions. She was annoyed by severe itching, and suffered from sleeplessness, weakness, and lack of appetite. Finally a blood examination was made, and the Wassermann reaction proved negative. When the patient was told that she was not syphilitic, she left the second dispensary and came to seek advice at Cornell.

*Examination* (Aug. 19, 1919).—The patient was a tall, well built, highly neurotic woman, who intelligently described her condition. She looked somewhat pale and slightly emaciated, and complained of weakness, nervousness, and lack of sleep, due to the itching.

On the back of the neck, in the region between the seventh cervical vertebra, the hair line, the mastoid bones, and the line of the sternocleidomastoid muscles, there were four large, annular and gyrate patches. The latter were thickened and elevated; the surface was smooth and shiny and violaceous in color. The normal skin lines were deeply marked. There was no scaliness. Close to the outer border of each patch were a number of typical lichen planus papules, each with a waxy surface and depressed center. The more or less circular area of skin enclosed within each patch was paler than normal, owing to a diminished amount of pigment. The color was not white, but a light pink. A large number of conical and pointed papules projected from the surface of each depigmented patch. The papules were pink or rose-colored and from the apex of each projected a fine filiform horny plug, which pulled out readily, leaving an almost colorless minute elevation with a central depression in its place. Most of the plugs were gray. A few of them, however, were short and black, and they resembled a comedo. Where the plugs had fallen out, there were minute pits. The papules in this location had a tendency to be arranged in parallel rows. The rest of the skin, on the back of the neck within the region described, and that extending downward to about the eighth dorsal vertebra, was literally covered with the pointed papules described, except that in this location they were a little more deeply colored, and there were comparatively more comedo-like bodies present. The papules were evenly distributed and there was no tendency to grouping. There was no attempt at patch formation. The skin felt rough and imparted to the hand passed over it the sensation of a very fine, but stiff, brush. The papules were very close to each other, so that, from a little distance, the skin looked nearly uniformly red and, with the numerous black dots scattered all over the surface, presented a striking appearance. A few small areas of vitiligo were seen in this region.

Over the mastoids and behind and above both ears, the skin was covered with typical papules and patches of lichen planus. The same condition was seen on the posterior portion of both cheeks and temporal regions, extending to the hair line. On the rest of the face, there was a number of diffuse, erythematous patches which were raised above the surface of the skin and were covered with fine scales. They appeared to be involuting patches of lichen planus.

On the front of the neck and chest, down to about the middle of the sternum, there was a large number of acuminate papules. They were as numerous in this location as on the back, and presented the same appearance, except that there was a smaller number of black dots. The same acuminate papules were present in greater or smaller numbers on the right arm to the elbow. Below that, there were a few lichen planus patches scattered among

a larger number of discrete, acuminate papules. A few small depigmented areas were also seen in this region. On the back of the forearm, there were two large annular patches of lichen planus, enclosing within the ring formed depigmented areas like the ones on the back of the neck, only the depigmentation, was more complete. The areas were whiter and had fewer horny spines. The depigmented areas were not atrophic; the skin was perfectly normal, and except for the spines, feels smooth and pliable. The rest of the forearm had many scattered acuminate papules.

On the left shoulder and arm, there were many acuminate papules and scattered among them were lichen planus papules and patches. From the elbow to the wrist, the planus patches were larger, more numerous, of various shapes and sizes, and frequently joined each other, giving the lesion a reticulated appearance. On the back of the forearm, there was one large depigmented patch, in size about  $2\frac{1}{2}$  by 5 inches (6.3 by 12.6 cm.). The annular patch of lichen planus surrounding this lesion was not complete, and only segments of it were present. The portions of the vitiligo patch that had no border were adjacent to a nearly normal skin sparsely dotted with red acuminate papules. Had we divided this patch into three portions, an upper, a lower, and a posterior, the skin of the upper one would have been found a little rough. There were several enlarged follicles or papules with black props on the apex of each. In the lower segment, the skin appeared soft and smooth without any horny plugs or comedo-like bodies, with only a few pits representing dilated follicles. The skin of the posterior portion, however, was perfectly smooth and shiny, and slightly atrophic.

On the inner surface of both cheeks, there were a number of white, hard and shiny, raised papules, also lines running radially backward.

On the greater part of the rest of the body, there was a mild follicular keratosis.

There were no lesions on the posterior surface of the phalanges, the palms, or the soles.

*Treatment.*—The patient was given Asiatic pills (arsenous oxid and black pepper), one-fortieth grain each, with the instruction to take one three times a day and to increase the dose one pill daily until three pills three times a day were being taken. Locally, 5 per cent. rectified oil of birch tar and 5 per cent. salicylic acid in Lassar's paste was prescribed. A biopsy was made, and the section was taken from one of the patches on the left forearm, including part of the vitiligo patch, the border, and a little portion of the skin outside of the lesion.

*Pathologic Findings.*—The stratum corneum was thickened and was made up of superimposed wavy lamellae with spaces between them. No nuclei could be found. The stratum lucidum was not to be seen. The stratum granulosum was well developed. It consisted of a double layer of cells with coarse granules. The stratum malpighii was diminished in thickness, especially in the region near the dilated follicles. Some of the cells of the rete, especially those of the lower layers, were swollen, edematous and vacuolated. The cell was round, the protoplasm did not strain readily, and the nucleus was shriveled, pushed to one side, and occasionally compressed against the cell wall. In several instances, the walls of two adjacent cells had broken through, forming a vesicle with two nuclei. The rete pegs were diminished in size and in places had entirely disappeared. Pigment cells were entirely absent in the epithelium.

The papillae were flattened, and toward the center of the lesion they had entirely disappeared. In that location, the epidermal-cutaneous junction had

become a straight line. The upper layer of the cutis was sclerotic in places; the fibrous tissue appeared homogeneous and stained deeply with eosin. There was a diffuse cell infiltration in this layer. Often, a space containing cellular infiltrate was present between the cutis and the epithelium. A few cells of the infiltrate made their way between the cells of the epidermis, obliterating the line of demarcation between the latter structure and the corium. In the middle layer of the cutis, the infiltration was more pronounced and was mostly confined to large, well circumscribed spaces following the course of the blood vessels. The lower layer of the cutis and the subcutis were normal.

The infiltrate was made up largely of small lymphocytes, and young spindle-shaped and branched fibroblasts. There were very few polymorphonuclear cells, a small number of plasma cells, and a comparatively large number of mast cells in every portion of the field.

The hair follicle was tremendously dilated and filled with a horny plug which extended down from the horny layer of the epidermis on the surface, and reached the bottom of the follicle. A very fine lanugo hair was usually, but not always, found in the horny mass of the follicle. Occasionally the hair had fallen out and a vacant space could be seen in its place. The plug was composed of longitudinal concentric lamellae. The stratum granulosum of the follicle was thicker, and the granules were coarser, and in places had run together to form droplets. There was a marked infiltration in the fibrous sheath of the follicle which extended far out into the surrounding corium. A number of cells of the infiltrate found their way between the cells of the outer layers of the follicle, partly obliterating the latter structure. No sebaceous glands could be seen in the field. They were entirely concealed from view by the infiltrate. There was no infiltration about the sweat gland. The duct remained normal and there was no infiltration about it along its entire course through the corium. Two ducts had been traced into the epithelium. They remained normal until they had nearly reached the latter structure. There they became dilated, their walls increased to three and four layers in thickness, and the dilated mouth of each contained a small horny plug.

Most of the vessels were dilated. Occasionally a vessel was encountered in which the lumen was narrowed almost to occlusion. There was thickening of the intima, which was caused by an increase in the size and in the number of layers of its cells. The adventitia was thickened and sclerosed. The fibrous sheath was infiltrated in all vessels.

The elastic tissue appeared to be normal in the two lower layers of the cutis, except that, toward the center of the lesion, some of the fibers appeared to be thicker. In the uppermost stratum, and in the location named above, the fibers were very fine and few in number, and many of them stained blue with acid orcein-polychrome methylene blue.

August 19, there were no changes, except that most of the planus lesions were covered with fine silvery scales.

September 3, the scales on the lichen planus lesions and on the borders of the depigmented patches were very fine and furfuraceous. The lesions themselves were a little paler. The color of the acuminate papules had changed from a deep red to a light pink. There seemed to be a smaller number of black dots than formerly. The horny plugs were gray, and imparted this color to the general appearance of the skin. The latter felt rough and almost file-like. The disappearance of the color from the acuminate papules within the vitiligo patches, made the latter look paler and brought out the depigmentation more prominently.

September 6, the flat, infiltrated lesions had thinned down considerably. They were much paler, but the color was still deeply violaceous. Scaliness was present on only a few patches, while most of them had a smooth and shiny surface which was thrown into folds. On the neck, the borders of the vitiligo patches had assumed a distinct brown color. The color of the acuminate papule was that of the normal skin. With the disappearance of the color from the papules on the back of the chest, a number of them were seen to be about twice the size of the average acuminate papule. They were round, flattened, and paler than the surrounding skin. Their surface was very shiny and that made them easily distinguishable from the surrounding acuminate papules. The plugs had fallen out, and in their places was seen a minute central depression. Side by side with the lesions described, there were several minute, polygonal, shiny areas which were a little depressed below the surface of the skin and possessed no horny plugs or central depressions.

September 13, the luster of the shiny papule described before had disappeared. The color was pale, the surface dull, and the papule so distinctly different from the surrounding ones that it could be picked out at a distance. Small, irregular patches of vitiligo were seen on the back in the region of the sixth dorsal vertebra, corresponding in location to the group of shiny, depressed, and irregular little areas seen before. They differed from their former appearance in having completely lost their luster and in having run together to form small irregular patches of vitiligo without any border around them. The horny plugs had now fallen out of a large number of papules on the back of the chest. The follicles had remained dilated, and comparatively large areas of skin had assumed the appearance of coarse-grained leather. The white, radial lines in the mouth had nearly disappeared and only a few white shiny papules remained.

September 19, new patches of vitiligo had developed on the back from the already described flattened acuminate papules. New shiny depressed areas were seen on the skin over the left shoulder blade.

September 28, the annular lesions surrounding the vitiligo patches, as well as the rest of the lichen planus lesions, had nearly disappeared. In their place, there was now a deep brown pigmentation. The spines, for the most part, had fallen out and the skin was beginning to feel smooth, soft and pliable.

October 6, all old active lesions had disappeared. Depigmented patches were to be seen, surrounded by deep brown borders and scattered brown patches. Additional depigmented papules had run together to form patches.

November 19, vitiligo, pigmentation, and pitting were still present. The little props in the new depigmented areas had fallen out and the patches were white and pitted. No border surrounded these lesions. The little irregular, star-shaped and slightly depressed patches which were found in this location, and which had apparently developed in the small areas of skin between the papules, had run together to form larger patches and, in doing so, had enclosed a number of acuminate papules within the newly formed patch, so that there was no distinction between the lesions formed in this manner and those formed by the paling down and by the subsequent enlargement of the acuminate papule to the size of a small patch. Only one newly formed patch had a faint pink border around it.

December 11, the condition continued about the same. One portion of the large depigmented patch on the left forearm looked a trifle more atrophic than at the beginning. At this stage the patient left the city, and no further observation was possible.

## COMMENT

At a glance it can be seen that the case closely resembled one of those described by Hallopeau. There was the same depigmented patch surrounded by a zone of lichen planus with typical lichen planus patches present on the patient. The horny plugs and comedo-like bodies were identical with those described by Hallopeau, except that in some patches they were numerous, arranged in rows, and placed in comparatively large papules. The pathologic findings agree with those of Darier, except that in the case herein described a mild infiltration, not seen by Darier, but found in Reiss' case, and in two cases of Zarubin, was present in the upper layer of the cutis. The diffuse eruption of acuminate papules situated outside of the vitiligo patches had not been seen in any of the other cases so far described. The question as to what constitutes a typical case of lichen atrophicus or sclereux has apparently not been definitely settled. In spite of the fact that all authors are practically in agreement as to the pathologic findings, there are great differences in the clinical descriptions of the cases reported. There seems to be two groups of cases. In one there is a complete absence of typical planus lesions, and the basic lesion is a white hard papule with a pink rim. The lesion in this group of cases has a closer resemblance to morphea than to any of the lichens. The other group of cases is characterized by a depigmented patch with horny plugs or dilated follicles, and surrounded by a red or violaceous border made up of lichen planus lesions. To this group belongs at least one of Hallopeau's cases, one of Zarubin's, the case reported by Reiss, and others. The vitiligo patch in Reiss' case had a sepia brown border. There is no doubt in my mind that the brown color in the last mentioned case was left after the clearing up of the annular patches of lichen planus which originally surrounded the depigmented lesions. This occurred in the case of the patient described in this article. It is quite likely that much of the disagreement in the clinical description of the lesions in the group of cases reported under the head of lichen atrophicus is due to a misunderstanding. It is probable that not all observers had the opportunity to follow up their cases long enough to be able to watch the changes in the lesions during the process of evolution and involution of the disease. For that reason, stages of the disease have been mistaken for a complete clinical picture. For the same reason, perhaps, there is also a disagreement on the question as to whether lichen atrophicus is a modification of lichen planus, or whether it is an entirely separate disease. If we subscribe to the statement of Ormsby that the papule is white from the beginning, that it is never colored, and that typical lichen planus lesions do not appear in conjunction with the depigmented lesions, we must logically assume that the disease in question is not a modification of the lichens,

but an entirely different disease. As a matter of fact, the two varieties of lesions have occurred together in a large number of the reported cases, including two of Ormsby's group. To assume that the papule is never red would necessitate the exclusion of most of the cases reported as lichen atrophicus, including some of those reported by Hallopeau, who named the disease.

The manner in which the lesion is developed has been variously described by several authors. According to Hallopeau, there are three ways in which the atrophic patch may develop: 1. A small angular violaceous papule develops a horny plug or comedo-like body in its center. That part of the papule becomes slightly pale and somewhat depressed. The papule enlarges peripherally and gradually changes into a ring with a pale center. The horny plug may fall out and leave in its place a little depression. As the lesion grows peripherally, it clears in the center. New planus papules are continually added to the border. Discrete papules are always to be found near the lesion. 2. The depigmented lesion may develop from a lichen planus patch instead of from a papule, and the result will be the same. 3. The vitiligo patch may be primary and the lichen planus border may develop secondarily around it. Csillag thinks that the primary lesion is a red conical papule. According to the observations of Crocker, the first thing to appear is a black dot: a red areola develops around it, the horny plug falls out, and the lesion becomes decolorized. Other writers describe the origin of the lesion thus: There is originally a flat or conical papule which may be round or angular or irregular in shape. According to some observers, a little scale develops on its surface, and when the scale is removed a scar-like depression remains; other papules become pale and depressed in the center without a scale being present. According to others, Ormsby included, the papule is white and hard from the start. A number of papules coalesce to form a patch. The border is not made up of lichen planus lesions, but is an extremely narrow rim of pink or red. No lichen planus papules are seen at the periphery of the lesion.

It is fortunate that the patient whose case is herewith described remained long enough under observation to throw some light on the possible mode of origin of the depigmented lesion. It was not a difficult matter to watch the stages of development of some of the lesions, as they took place in rapid succession within a short period. Unfortunately, there were no fresh lesions developing in the region in which lichen planus papules and patches were the predominating element, and therefore it is not safe to draw any conclusions as to the mode of origin of the depigmented lesions in this region, outside of what can be logically inferred, namely, that the lesions might have developed from lichen planus papules and patches in the manner

described by Hallopeau. The origin of the depigmented lesions from acuminate papules on the back of the chest, however, was plainly observed at the beginning, and was followed to the completion of the development of the patch. The lesions, formed in the small areas of skin between the red acuminate papules and inclosing the latter, suggest a mode of origin not at all unlike the one described by Crocker.

The horny plugs within the older depigmented patches can easily be imagined to correspond to the original papule and plug from which the lesion had developed, as the papules in which they are placed were small and colorless. In the younger lesions, however, the papules were comparatively large and deeply colored, and were in no respect different from those on the skin outside of the depigmented lesions. They were placed close to one another and sometimes were arranged in parallel rows. Remembering that some of the patches were in existence before the generalized eruption of acuminate papules, may we not think of the possibility that at least some of these papules made their appearance on top of previously existing patches of vitiligo? This possible mode of development of the lesion is also in agreement with one of those described by Hallopeau.

#### CONCLUSION

It is apparent that my case is identical, clinically and microscopically, with those described by Hallopeau and others under the title of lichen atrophicus or sclereux. The mode of origin of the atrophic patch also logically points in that direction. What has not been accounted for is the generalized eruption of acuminate papules situated outside of the depigmented patches. In spite of the fact that the papules were smaller and the plugs were more filiform than in typical cases of lichen acuminatus, these points of difference are insignificant compared with the many points of similarity of that eruption with the disease mentioned above. It is only necessary to mention the microscopic findings, the extreme itchiness, and the deep red color of the papule for a period of more than a year after the onset of the disease, and the rapid progress of the patient toward recovery after arsenic treatment, to establish the identity of the case in question with lichen acuminatus. On the other hand, the age of the patient, the occurrence of the eruption in conjunction with typical lichen planus lesions, and its appearance on the chest, which, according to Crocker, never occurs in lichen spinulosus,\* are strong points against its having any relation to the latter disease, the only one with which it might possibly be confused.

From what has been said, I feel justified in my belief that the case presented is one of a very rare combination of the two types of lichen, both being of the atrophic form: hence the justification of the name.

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