

## ACRODERMATITIS CHRONICA ATROPHICANS: ITS SYMPTOMATOLOGY AND DIAGNOSIS.

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ALTHOUGH the literature on the subject of acrodermatitis chronica atrophicans is already voluminous and quite comprehensive, more especially in the German language, still the incidence of a case of this type of atrophy of the skin nearly always kindles the interest of him who observes it; besides, rarely is a case presented before a body of dermatologists without exciting more or less controversial discussion as to the nosological position of the disorder. This statement applies chiefly to American dermatologists, for our European confrères seem to have the relationship between this and other types of atrophies pretty well fixed in their minds.

In a previous essay<sup>1</sup> we presented a clinical and histological study of a case of acrodermatitis chronica atrophicans occurring in a woman, aged fifty-eight years, who, aside from her cutaneous disorder, appeared to enjoy normal health. This case (Mrs. B. D.) was peculiar in that it presented an unusual abundance of the soft, doughy, tumor-like masses to which Herxheimer<sup>2</sup> called attention in his second paper on the subject, published in 1905. We attempted to show, in the article dealing with the above-mentioned case, that the clinical features of the dermatosis were sufficiently well-marked and characteristic to uphold the contentions of Herxheimer and Hartmann,<sup>3</sup> who differentiated this form of diffuse idiopathic atrophy of the skin from the clinical types akin to it.

Soon after the publication of this report a second case of the same malady came under the observation of Dr. MacKee and ourselves in the dermatological department of the Vanderbilt clinic. The remarkable and extensive changes which the skin of these patients exhibit, coupled with an etiology as yet shrouded in utter obscurity, incite us to record an additional case in the literature.

<sup>1</sup> Wise, Fred., *Acrodermatitis Chronica Atrophicans: the Transition from Infiltration to Atrophy*, Jour. Cutan. Dis., April, 1914, xxxii, No. 2.

<sup>2</sup> Further Observations on *Acrodermatitis Chronica Atrophicans*, Jour. Cutan. Dis., 1905, xxiii, p. 241.

<sup>3</sup> Ueber *Acrodermatitis Chronica Atrophicans*, Arch. f. Dermat., 1902, lxi, pp. 67 and 255.

The idiopathic progressive atrophies of the skin, while resembling each other in their clinical and histological aspects, have certain distinctive characters for each type. Although it is true that these characters may not always be easily differentiated, inasmuch as one type may appear to merge into another, or two or more types may occur together, it is also true that careful clinical observation and study will reveal certain differences which, though sometimes vague, are at other times quite patent, in various types of cutaneous atrophies which at first glance seem to be almost identical in course, appearance, and evolution.

Finger and Oppenheim,<sup>4</sup> in 1910, published a complete monograph on the subject of the cutaneous atrophies, in which they described, more or less exhaustively, most of the dermatoses in which atrophy plays a part as an essential symptom.

They divided the subject into two main groups, which, for the sake of better orientation, we will note here. The first group comprised all those cutaneous atrophies which are to be differentiated from the true progressive, chronic, atrophying dermatitides, and included:

1. Congenital atrophies.
2. Striæ and maculæ distensæ.
3. Cutaneous atrophies following nerve lesions.
4. Cutaneous atrophies following chronic infectious diseases of the skin.
5. Senile atrophy and atrophy due to exposure to heat, cold, winds, etc. (element atrophy).
6. Xeroderma pigmentosum, hlepharochalasis, kraurosis vulvæ.

The second large group included the idiopathic atrophying dermatitides, with the following sub-groups:

1. Dermatitis atrophicans progressiva idiopathica chronica diffusa.
2. Acrodermatitis chronica atrophicans.
3. Dermatitis atrophicans maculosa.
4. Combinations of dermatitis and acrodermatitis atrophicans chronica idiopathica diffusa, with dermatitis atrophicans maculosa.

It is with the second of these sub-groups, acrodermatitis chronica atrophicans, that this paper is concerned. This type of diffuse progressive atrophy of the skin was first described by Herxheimer and Hartmann<sup>5</sup> in 1902. It is an inflammatory disease, usually beginning on the backs of the fingers and the feet, progressing very slowly and insidiously upward; the inflammation gradually gives place to infiltration and tumor formation, which, in turn, is succeeded by the characteristic atrophy. In addition to the terminal atrophy there may also appear one or more hard, fibrous

<sup>4</sup> Die Hautatrophien, F. Deuticke, Wien und Berlin, 1910, containing most of the literature to date.

<sup>5</sup> Loc. cit.

nodules—"end products" of the disease—usually occurring in the vicinity of the knees and elbows. Pigmentations and depigmentations, telangiectases, desquamation, cutaneous hemorrhages, etc., also play a part in the symptom-complex. The disease is very chronic in its course, and is usually free from subjective symptoms.

The chief diagnostic points to be considered in acrodermatitis chronica atrophicans are the following:

1. The morbid changes usually begin on the backs of the hands and feet and slowly advance upward toward the knees and elbows in a centripetal manner. Hence the name "acrodermatitis," from the Greek "akra," extremity.

2. They are accompanied by well-marked inflammatory and infiltrative formations, which culminate in atrophy. This atrophy is of the peculiar "wrinkled cigarette-paper" type, to which Jndasohn<sup>6</sup> applied the term "metodermie." The skin appears transparent, loose, wrinkled into fine parallel folds, has lost its elasticity, and can be easily raised from the underlying tissues. It has a silky or velvety feel. The color is rose red or bluish red. The subcutaneous fatty tissue is absent. The underlying veins and tendons shine through the translucent skin.

3. The occurrence of the so-called "ulnar band," to which Hersheimer<sup>7</sup> first called attention. It consists of a strip of inflamed skin, running up the forearm from the wrist to the elbow, usually overlying the ulnar bone. An analogous band may appear on the leg. It occurs as a more or less circumscribed, edematous, or infiltrated band of inflamed skin, varying in length and breadth. In consistency it may be soft and doughy or hard and resistant. The color may be a bright or a dusky red or it may be violaceous. The surface may be tense or wrinkled. It is present during the stage of infiltration and later gives place to the characteristic atrophy. This ulnar band seems to be peculiar to acrodermatitis chronica atrophicans. It is present in the patient who forms the subject of this report, and was described in the case reports of Hersheimer and Hörtmann,<sup>8</sup> Bruhus,<sup>9</sup> Lebmann,<sup>10</sup> Baun,<sup>11</sup> Leven,<sup>12</sup> Ruseh,<sup>13</sup> Hertmanni,<sup>14</sup> Finger and Oppenheim,<sup>15</sup> Neumann,<sup>16</sup> and others.

4. In the majority of cases of acrodermatitis chronica atrophicans there appears to be an area of skin which seems to be almost

<sup>6</sup> *Atrophia maculosa Cutis*, Zweiter Kong. Deutsch. dermat. Ges., 1891.

<sup>7</sup> *Loc. cit.*

<sup>8</sup> *Loc. cit.*

<sup>9</sup> *Ueber idiopathische Hautatrophie*, *Charité Annalen*, 1901, xxv.

<sup>10</sup> *Ibid.*, *Inaug. Diss.*, Leipzig, 1902.

<sup>11</sup> *Acrodermatitis Chronica Atrophicans*, *Arch. f. Dermat.*, 1903, lxi, p. 446.

<sup>12</sup> *Ibid.*, 1903, lxi, p. 247.

<sup>13</sup> *Ueber idiopathische Hautatrophie und Sclerodermie*, *Dermat. Zeitsch.*, 1906 xiii, p. 749.

<sup>14</sup> *Verh. X Kong. Deutsch. dermat. Ges.*, 1908, p. 290.

<sup>15</sup> *Loc. cit.*

<sup>16</sup> *Lehrbuch der Hautkrankheiten*, 1880, 5th ed.

immune from the advances of the malady. It consists, roughly speaking, of a triangle of the integument surrounding the genitals, bounded above by Poupart's ligament and at the sides by the anterior and inner aspects of the upper third of the thighs. Such an area of non-affected skin is illustrated in the photograph accompanying our paper.<sup>17</sup>

These four diagnostic points are by no means constant factors in the symptomatology of the disease; indeed, they rarely occur simultaneously in the same patient. The morbid changes which the integument undergoes are manifested by a slow, but nevertheless constant and progressive alteration in the disease picture; these changes begin with an edema and inflammation, after which follow the infiltration and the terminal atrophy. Each of the various pathological phases of the disease—inflammation, infiltration, atrophy—may involve a period of months or years in their evolution and development. It must be borne in mind that patients have presented themselves for treatment or observation in whom the disease has existed anywhere from a few weeks (Herkheimer and Hartmann) to a great many years (forty years in Wise's case). It is evident, therefore, that a given case may present only one or two of the characteristic points mentioned above, the other features having long since disappeared. The peculiar "ulnar band," for example, may persist for a certain number of weeks, months, or even years without ever having come under the physician's observation. Many of the reported cases have presented themselves long after the subsidence of the active morbid changes, and in whom the terminal atrophy and anetoderma are the only characteristic remaining features of the dermatosis.

On the other hand it may be well-nigh impossible for the most astute diagnostician to recognize the malady in its earlier stages. A chronic edema and inflammation of the backs of the hands, or of the feet, persisting for a number of months without subjective disturbances, may be interpreted in a number of different ways; not until the advent of infiltrative lesions, accompanied by or culminating in atrophy of the affected integument, is there a likelihood that the true nature of the disease would be recognized. Thus, Ehrmann<sup>18</sup> and Weidenfeld<sup>19</sup> have reported instances in which the disease was ushered in by acute swelling and inflammation of the integument, resembling lymphangitis and erysipelas.

It follows, therefore, that in order to formulate a rational symptom-complex of *acrodermatitis chronica atrophicans* it is necessary to study and compare a number of cases presenting the various evolutionary phases or cycles of the disease, its localization, areas of predilection, mode of progression and termination.

<sup>17</sup> Jour. Cutan. Dis., April, 1914.

<sup>18</sup> Ausgedehnte idiopathische Hautatrophie, Wien. klin. Woch., 1909.

<sup>19</sup> Atrophia cutis idiopathica, Wien. dermat. Ges., November, 1909.

Shortly after the completion of our studies of the case of Mrs. B. D. (*loc. cit.*) there appeared at Professor Fordyce's clinic a second case (Mrs. H. L.) of acrodermatitis chronica atrophicans, also in a middle-aged woman. This patient was presented by Dr. MacKee before the New York Dermatological Society at its October, 1913, meeting.<sup>20</sup> A brief report of the case was subsequently published.<sup>21</sup> The preliminary routine examination of



FIG. 1.—Showing anetoderma of thighs and knees, scleroderma-like appearance of legs and ulceration around ankles. (Patient, Mrs. H. L.)

this patient disclosed the interesting fact that her blood showed a positive Wassermann reaction and that a marked glycosuria was present. She had, however, neither cutaneous nor visceral symptoms referable to either syphilis or diabetes at the time she came under our observation.

The marked resemblance in the appearance of this patient to that of our first case was striking: the clinical picture which her skin presented possessed so many points of similarity to that of our first patient that one might be almost justified in saying that the one description may apply to both cases if we except the tumor-like, infiltrative masses which appeared on the thighs of our first patient. In addition, however, the second patient interested us on account of the presence of the "ulnar band," mentioned above as being one of the characteristic features of the dermatosis from which she was suffering.

**CASE.**—Mrs. H. L., aged fifty-four years; married at nineteen. She was born in Stockholm and came to this country when twenty-five. Her family history was negative. She was the only member of the family afflicted with a skin disease.

**Personal History.** Her first child was born within a year after marriage. Then followed five successive normal pregnancies; of these, two resulted in the birth of healthy children, while three child-

<sup>20</sup> MacKee, Case Demonstration for Dr. Fordyce, Jour. Cutan. Dis., February, 1914, xxxii, No. 2, p. 143.

<sup>21</sup> Jour. Cutan Dis., February, 1914.

ren were said to have died at birth; the cause of the deaths was not ascertainable. She had had no miscarriages. Three of her offspring are living and said to be healthy. The husband is living and apparently in normal health. Twenty years ago she had an attack of gall-stone colic, accompanied by severe gastro-intestinal disturbances. Fourteen years ago she was treated for a severe attack of jaundice at the Long Island College Hospital. No operation was performed. A little over two years ago she had an attack of pneumonia; since that time she has been afflicted with periodic



FIG. 2.—Showing "immune area" below Poupart's ligament; anetodermia of knees and thighs. (Patient, Mrs. H. L.)

attacks of asthma, bronchitis, and articular rheumatism. Shortly after her recovery from pneumonia examination of the urine revealed the presence of glycosuria. Menstruation ceased at the age of forty-eight.

*Physical Examination.* The patient is a tall, heavy-framed, obese woman, weighing over 200 pounds. Examination of the thoracic viscera (performed by Dr. Kent) revealed the presence of a rather severe bronchitis and asthma. The abdominal viscera were impalpable, due to the woman's obesity. The blood picture

was normal. The Wassermann test (performed by Dr. Jagle) was positive. The urine, examined on several occasions, presented varying small quantities of albumin and sugar. The patient has a florid complexion and her general health is fair. The hair, teeth, and nails are normal.

The cutaneous changes began about twelve years ago. They were ushered in by the appearance of reddened, inflamed, and edematous, slightly elevated, circular and oval patches of skin



FIG. 3.—Showing anetodermia of thighs and buttocks and tense scleroderma-like skin of legs. (Patient, Mrs. H. L.)

over the dorsal surfaces of the feet and on the anterior portions of the lower half of the legs, just above the ankles. There was a moderate amount of scaling. Itching was slight. Similar inflamed areas soon made their appearance on the upper half of the legs and on the thighs; these gradually coalesced and spread upward, toward the groins and buttocks, until practically the entire integument of both lower extremities and buttocks was involved in the process. These areas of inflammation, therefore, began to appear at the distal portions of the extremities and, by their coalescence, spread centripetally toward the trunk. The process seemed to be arrested a few inches below Poupart's ligament, anteriorly, thus leaving a triangular portion of the upper and inner aspects of the thighs free of the disease. After persisting, for an indefinite number of months, in the form of red, swollen, and inflamed patches,

these areas would assume a purplish or violaceous hue, becoming more or less resistant to the touch, and somewhat elevated above the as yet unchanged surrounding integument. By the time that fusion of the patches had occurred the affected skin had assumed a dark-red, purplish hue, had become glossy, parchment-like, wrinkled, and dry, especially around the knees and ankles. After a lapse of two or three years (the patient's narrative was very indefinite), the skin around the ankles and

over the shins changed to a yellowish tint and became hardened and bound down over the underlying tissues, while the skin around the knees, on the contrary, became loose, folded, and flaccid. At the same time the superficial veins and tendons began to shine through the skin. Around the knee-joints, on the calves of the legs and on the thighs and buttocks, the skin became at first reddish pink, then darker red, finally assuming a purplish and violaceous hue; this discoloration and accompanying change in

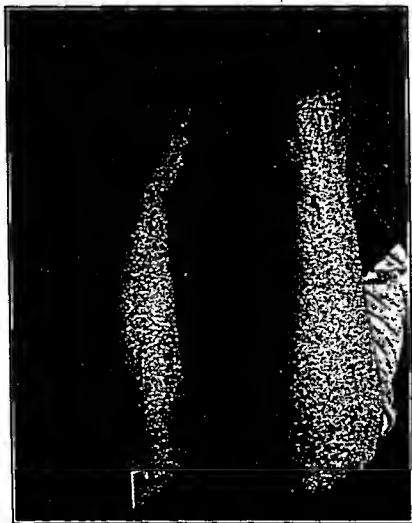


FIG. 4.—Showing the "ulnar band" of right forearm; atrophy of the skin of the hands. (Patient, Mrs. H. L.)

the texture of the skin gradually extended upward until it reached nearly to the waist line at the sides and on the back. About two years ago an ill-defined patch of inflammatory redness made its appearance on the dorsum of the right hand, followed soon after by a similar patch on the left hand. Since then the same changes appeared on the ulnar aspect of the right forearm, running toward the elbow in the shape of a wide band or strip. This ulnar band seems to have developed during the last few months. On the lower extremities the process appears to have come to a standstill. Now

and then small ulcers would appear on the legs and feet as a result of scratching and infection. The pruritus has always been moderate in severity.

*Examination.* The affected portions of the integument were distinctly atrophic. The appearance, however, of the various areas of atrophic skin was by no means a uniform one. On the dorsum of the feet, around the ankles and over the tibiae, the skin was waxy, glistening, smooth, yellowish, and "bound down" over the underlying tissues. To the touch it was hard and resistant, resembling the condition seen in ordinary scleroderma. Over the

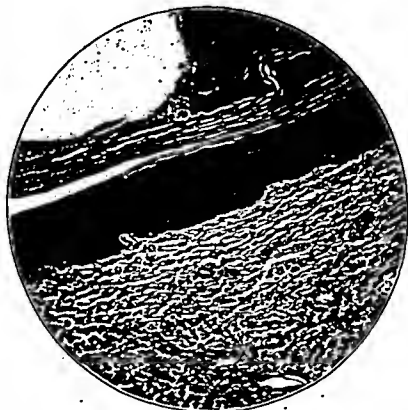


FIG. 5.—Showing hyperkeratosis, loss of interpapillary pegs, absence of papillae, edema of collagen, lymphocytic infiltration of the corium.

calves of the legs, on the thighs and buttocks, and in the popliteal spaces the integument was thin, more or less wrinkled, flaccid, reddish pink in color and transparent, permitting the underlying veins to shine through as tortuous, blue strands, varying in width and in prominence. Around the knee-joints the skin seemed to be redundant, hanging in loose folds with the patient in the erect position; the surface showed a fine, parallel wrinkling, giving to it a characteristic silky appearance; the color was rose red; to the palpating finger the skin gave a velvety impression, as though it were loosely distended with air or water. When a fold was lifted between the fingers and then released an utter lack of resiliency was manifested. The entire integument of the lower extremities and the buttocks was implicated in this atrophic process, with

the exception of a small triangular area on the inner aspect of the thighs, just below the groins. The upper limiting border of the process showed a somewhat abrupt line of demarcation.

On the buttocks and on the anterior and posterior surfaces of the thighs there were twenty-five to thirty small, rounded, slightly elevated subcutaneous nodules, varying in size from a lentil to that of a pea. They were barely visible, their color differing but little from that of the surrounding integument; but on palpation they could be made out without difficulty, on account of their fleshy, semisolid consistence.

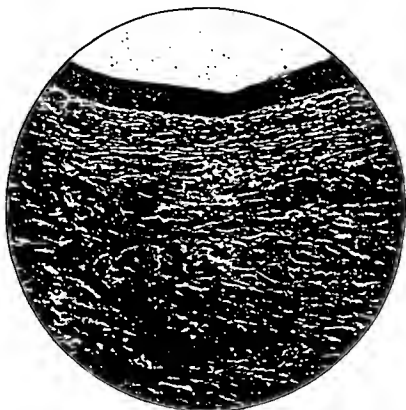


FIG. 6.—Showing similar changes as in Fig. 5, but with advanced atrophy of the epithelium.

The backs of the hands presented a smooth, translucent, atrophic skin, with numerous dark-brown lentigines and tortuous veins underneath, which, together with the tendons, shone through the integument.

Over the ulnar aspect of the right forearm a well-defined, partly erythematous and partly pale, atrophic band of skin was present, extending from the dorsal surface of the wrist to the elbow. With the exception of a small, atrophic patch half-way between the wrist and elbow this area was rose red in color, smooth, glistening, somewhat translucent, and showing a tendency to become bound down to the underlying tissues. There was no palpable infiltration. At the elbow, with the arm fully extended, the characteristic "cigarette-paper wrinkling" was present. Here the skin resembled

papillae and marked degeneration of the collagen, the few remaining degenerated fibers showing a fine fibrillation, the fibers being widely separated and edematous. Scattered throughout this area were seen small mononuclear lymphocytes, together with many plasma cells. The bloodvessels showed distinct endothelial proliferation, the walls of the smaller ones being markedly thickened. The infiltration was not more pronounced in the vicinity of the bloodvessels than elsewhere. There was complete absence of elastic tissue in the upper portion of the *pars papillaris*; lower down a few fine fibers, showing multiple fractures, were still present.

In the *pars reticularis* the collagenous material was almost entirely replaced by edematous fibrous tissue, the small-cell infiltration being less pronounced than in the *pars papillaris*. This region showed areas of fibrous tissue arranged in a roughly stellate manner, around a tiny central fibrous nodule. Here and there were seen a few areas of circumscribed cellular infiltrations, consisting of lymphocytic and plasma cells, together with a few fibroblasts. Marked endothelial and perithelial proliferation was seen in some of the bloodvessels in these infiltrated areas as well as dilatation of the lymph spaces. The walls of the bloodvessels were thickened, some of their lumina being totally obliterated.

There was a total absence of hair follicles and sebaceous glands, while the remaining coil glands showed marked degeneration, the epithelium being absent in a large number of them. A considerable cellular infiltration was present around the coil glands, composed of plasma cells and lymphocytes. The arrectores muscles were few in number and showed extensive cloudy swelling and atrophy. The elastic tissue was markedly reduced throughout, the still remaining fibers being very fine, showing multiple fractures and cloudy swelling. The subcutaneous fat was present in normal amount.

This histological picture is almost the exact counterpart of many, if not most, of the microscopic appearances of the sections obtained from this type of atrophy, as recorded in the literature. It is practically identical with the findings recorded in our first patient, with this exception: In Case 1 we examined sections showing three stages of the disease—namely, hypertrophy, atrophy, fibrosis; in Case 2, the hypertrophic or infiltrative stage of the malady having run its course, we have left only the final atrophy and fibrosis. Evidences of the preëxisting hypertrophic stage were, however, manifested also in our second patient by the presence of the small areas of round-cell infiltrations as described above.

**CLINICAL CONSIDERATIONS.** If we compare the dermatoses presented by our two patients from a clinical point of view, we are at once impressed by the fact that the hypertrophic lesions, which comprised the most interesting feature of Case 1, were so few and scattered in our second case that they may have passed

by unnoticed had they not been sought for. Such a circumstance adds added emphasis to what has already been pointed out—namely, that the disease presents totally different types of lesions, depending upon its evolutionary states or cycles of development. In our second patient the transition from hypertrophy to atrophy and anetoderma was probably a much more rapid process than in the patient we described in our first report. The existence of the hypertrophic lesions in Case 2, small and inconspicuous though they may be, again supports the contentions of Herxheimer and Hartmann, who declare that the atrophic phenomena are, at some time or other in the course of the disease, preceded by infiltrative lesions. On section these infiltrations show characteristic cell aggregations of lymphocytes and plasma cells. They must not be confounded with the peculiar fibrous nodules, which occur in the final stages of some cases of acrodermatitis chronica atrophicans (Ketron<sup>22</sup>).

The occurrence of scleroderma-like areas on the lower extremities of many cases of the disease is a subject which has aroused much interest among those who have studied this dermatosis. Numerous instances have been recorded (Finger and Oppenheim,<sup>23</sup> Herxheimer,<sup>24</sup> Arndt,<sup>25</sup> Heuck,<sup>26</sup> Kingsbury,<sup>27</sup> Kanokyo and Sutton,<sup>28</sup> and many others). In nearly all long-standing cases of the disease we are confronted with two types of atrophy, which, clinically, are diametrically opposite in appearance. The skin of the knees, for example, presents the picture of a rose-red, flaccid, wrinkled and folded, translucent and velvety type of atrophy—the anetoderma of Jadassohn. The dorsum of the feet and the lower legs, on the contrary, are covered by an envelope of skin which is hard, tense and drawn, bound down, somewhat opaque, waxy or pale yellow, smooth and glistening—a scleroderma-like form of atrophy. In the first type the redundant skin may be readily lifted between the fingers; in the second the tense skin cannot even be grasped between the fingers or lifted from the underlying tissues. As Finger has pointed out, the occurrence of these scleroderma-like areas in acrodermatitis chronica atrophicans has been the cause of frequent errors in diagnosis, many of the cases having been relegated to the scleroderma group of dermatoses (Jakobson,<sup>29</sup> for example).

“With regard to the relationship existing between anetoderma

<sup>22</sup> Dermatitis Atrophicans, with Report of a Case showing Fibroid Formations, Urol. and Cutan. Rev., 1913, i, p. 289.

<sup>23</sup> Loc. cit.

<sup>24</sup> Loc. cit.

<sup>25</sup> Verh. d. X Kong. deutsch. Dermat. Ges., 1908, p. 351.

<sup>26</sup> Acrodermatitis Chronica Atrophicans cum Sclerodermia, Ikon. Dermat., 1907, ii, plate x.

<sup>27</sup> Acrodermatitis Chronica Atrophicans with Sclerodermia, Jour. Cutan. Dis., September, 1907.

<sup>28</sup> Jour. Cutan. Dis., 1909, xxvii, 556.

<sup>29</sup> Berlin. dermat. Ges., 1909, v; Dermat. Zeitsch., 1906, xiii, p. 873.

and sclerodermia," says Finger,<sup>30</sup> "we have already called attention to the fact that a certain group of cases, the so-called morphea of French and English authors, give the impression of being transitional stages between the two diseases. It would be necessary to demonstrate a more intimate relationship between these two processes to convince me that anetodermia and sclerodermia may exist conjointly in the same individual. Their simultaneous occurrence would point to a common etiology. Such, however, is not the case. We have mentioned the fact that the diagnosis of sclerodermia has been made erroneously with reference to the infiltrated lesions of acrodermatitis chronica atrophicans as well as the tense forms of atrophy which occur in the course of diffuse anetodermia in those areas in which the skin is naturally ("physiologically") more or less tense and drawn—namely, the dorsum of the foot and the lower leg, anteriorly. After a thorough perusal of the literature, I am unable to convince myself that a combination of the two forms of tissue changes may coexist; and if such a case does occur, it is an open question whether an etiological factor is common to both, or whether we are dealing merely with a coincidental appearance of two unrelated dermatoses. . . . Taking into consideration the fact that all of the so-called atrophies begin with inflammatory phenomena, it would seem wiser not to employ the term "atrophies," but rather "atrophying dermatitides," to designate the two groups—namely, (1) anetodermias; dermatitides culminating in flaccid atrophy; (2) dermatitides culminating in tense atrophy."

Róna,<sup>31</sup> on the contrary, seemed to look upon the tense, bound-down, atrophic areas in acrodermatitis chronica atrophicans as being a true sclerodermia. In a discussion on the chronic atrophying dermatitides, he states: "To what extent sclerodermia and acrodermatitis atrophicans are inter-related, is a question which can be decided only after much further study, especially with relation to etiology. There seems to be little doubt, however, that the same pathogenic factor may give rise to the cutaneous changes resulting in typical sclerodermia, as well as typical acrodermatitis, for twelve cases have already (1908) been recorded in which the two diseases occurred simultaneously in the same individual."

Oppenheim<sup>32</sup> presented a patient with the sclerodermia-like areas on the lower legs, before the Xth Congress of the German Dermatological Society. He excised a piece of skin from the dorsum of the foot, in an area which presented the transition from the dense, yellowish to the soft, wrinkled and reddish integument;

<sup>30</sup> Die Hautatrophien (Atrophia diffusa, Anetodermie, Atrophia maculosa) und deren Verhältniss zur Sklerodermie, XVI Internat. Cong. Med., Budapest, 1910.

<sup>31</sup> Acrodermatitis Chronica Atrophicans, Verh. d. X Kong. Deutsch. dermat. Ges., 1908.

<sup>32</sup> Verh. d. X Kong. Deutsch. dermat. Ges., 1908.

that is, a section in which two coexisting morbid processes were manifest to the naked eye.

The histological examination of the transitional portion of this section presented the following changes: absence of papillae; attenuation of the epithelium over the atrophic area; almost normal epithelium over the thickened area. The connective tissue of the cutis was rather dense in the upper portions; the bloodvessels in the atrophic area were dilated, showed only moderate infiltration, their walls being but slightly altered; in the thickened portion there was much greater infiltration and no dilatation of the bloodvessels.

The chief changes affected the elastic tissue. In the atrophic portion this was totally absent in the upper layers of the cutis, but in other areas there were small islands of elastic fibers which showed structural changes; they were thickened, clumped, failed to take the elaein stain, but in the deeper layers of the cutis, they appeared to be normal. In the thickened portion the elastic fibers in the cutis were preserved up to the epithelial border; they were delicate; tortuous and wavy, and took the stain in a normal manner; there was a sharp line of demarcation between the areas in which the elastic fibers were present and in which they were absent.

"The significance of these histological findings point to the existence of a scar-like tissue, which may develop, as the result of secondary influences, from the atrophic tissue. We cannot regard these areas in the light of a scleroderma on account of the absence of increase in collagen, absence of papillae, and lack of bloodvessel changes; nor can we regard it as an atrophic stage, on account of the preservation of the elastica and because the clinical picture is strongly against such an assumption."

Evidently the question as to the true nature of the scleroderma-like areas in acrodermatitis atrophicans will eventually be determined by further laboratory investigation. For it must be admitted that those observers who look upon them as being ordinary scleroderma, base their opinion on clinical grounds alone.

The "ulnar band" and its analogue on the calf of the leg is so characteristic of the disease that it must be considered an important diagnostic factor in the differentiation of acrodermatitis atrophicans from other forms of diffuse cutaneous atrophies. Its absence, as has already been pointed out, is of little diagnostic significance, while its presence is a strongly corroborative symptom of the disease. Hertmanni<sup>22</sup> alone presented a series of seven consecutive cases from his clinic, in each of which the ulnar band was a prominent symptom.

As to the etiology of the disease, nothing is known definitely.

<sup>22</sup> Acrodermatitis Chronica Atrophicans, Verh. d. X Kong. Deutsch. dermat. Ges., 1908.