Ohmann-Dumesnil (A. H.) ad

SPONTANEOUS KELOID.

CLINICAL LECTURE DELIVERED AT THE ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS.

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presented by the author

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THE case that I wish to present to-day is one which is interesting on account of two reasons: first, because it is a rare manifestation of the disease; secondly, because it presents a distribution over so extensive an area that such examples are but rarely seen. If you will remember, keloid is generally limited to the colored race. It is a connective-tissue new growth, which may occur either as the result of some traumatism or spontaneously. The cases most commonly seen are traumatic, and are the results of burns, cuts, lashes, operations, or any condition which may cause a traumatism, the keloid occupying the place which would have been occupied by a scar had the traumatism healed as it does under ordinary circumstances. Cases, however, of the second variety, or of spontaneous keloid, occasionally occur, and these are comparatively rare. Plicque says that spontaneous keloid is not only rare, but a condition whose etiology is hard to establish. He states that Wilson, Kaposi, Vidal, and Schwimmer altogether have seen but seventy-two cases. Van Harlingen states that he never saw one, and authors in general do not claim that they have had much experience so far as seeing cases of spontaneous keloid is concerned.

In the present case you see before you an individual who has been kindly referred to me by Dr. W. F. Thornton, of this college, who has gone to the further trouble of supplying the following notes in regard to the history of the case:

CASE.—Sylvester C., aged thirty-one, a mulatto, musician by occupation, applied to him for treatment on November 15, 1891.

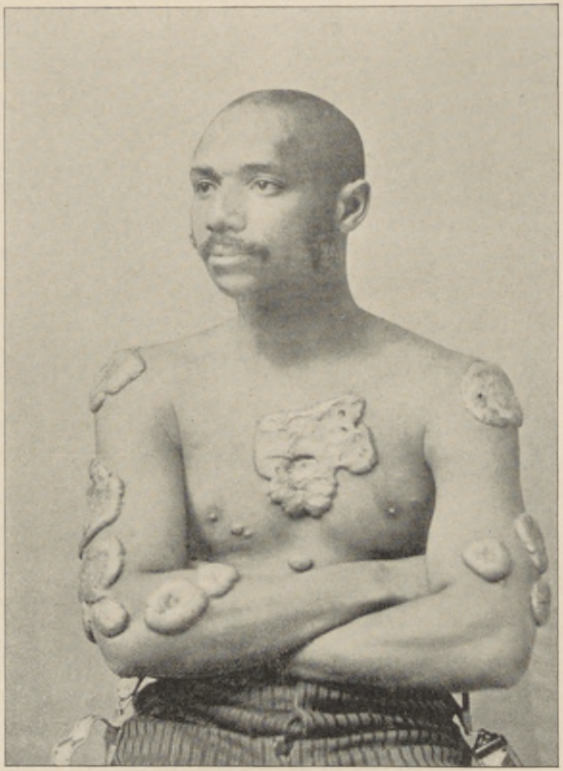

FIG. 1.—Spontaneous keloid (front view).

FIG. 2.—Spontaneous keloid (back view).

Family History.—The mother alone is alive, the father having died of pneumonia. The mother is well and strong, forty-seven years of age. The father's history, so far as could be ascertained, is good. Three brothers and one sister are living, all being healthy and strong, and there is no history in any of constitutional trouble of any kind. Syphilis or tuberculosis does not exist in any of the parents' relatives or ancestors, so far as the subject knows.

Anamnesis.—The patient was vaccinated on the right arm when three years of age. When the vaccination healed it left a small tubercle on the site of the scar, and at eight years of age the tubercle began to enlarge, and continued to do so until it became the size of a silver dollar in circumference. Then new tubercles began to appear upon the right arm only, and they continued to enlarge until they have reached the size shown at present. They next appeared upon the breast as they did upon the arm, and followed the same course. Then they appeared upon the hips, next upon the left arm, then upon the face. Small tubercles would appear while these were enlarging.

Status Præsens.—The patient is of medium height, well built, inclined to be muscular; is active, and complains of no discomfort, except so far as it may be connected with his cutaneous trouble. Upon inspection, he presents the following appearance. Upon the left cheek there is a tumor of the size of a walnut, rather flattened and glistening, traversed by enlarged blood-vessels of an arterial character. Upon the right arm he has a large, flattened tumor, rather depressed at the centre, occurring at the apex of the shoulder. Lower down we find four others, of varying sizes, rather paler than the normal integument, existing upon the outer aspect of the arm down to the elbow. On the right forearm there are two other tumors, which are also rather large and projecting, like the others, being slightly depressed at the centre. The apex of the left shoulder is also occupied by a keloidal tumor, while upon the left arm there are three more, one situated rather anteriorly, the two others being upon the exterior aspect of the arm, the forearm not being implicated. Upon the chest a broad, irregular keloid occupies the site of predilection of this disease,—viz., the sternal surface,—encroaching laterally upon each breast. Upon the right breast there are two small tumors, situated about an inch and a half internally to the nipple, one of these tumors being slightly smaller than the other. Upon the left breast we find a very small tubercle, external to and about an inch and a quarter from the left nipple. Below and between the breasts, about two inches either way, there is another tumor, about an inch long and half an inch

in breadth. The lower border of the scapula as on the left side one or two small nodules, and on the right two well-defined keloidal tumors; while below this, throughout the surface of the back, there are numerous small nodules distributed. Upon the buttocks there are upon the right two large tumors, of rather irregular shape, and upon the left one, in which the shape is such as to suggest that there were several tumors which have coalesced. As you see, the distribution is quite extensive, and the small subcutaneous nodules which are seen at present are gradually growing larger, and promise to become keloidal tumors in their turn.

When we come to look at the morphology of these growths, we find that many of them—in fact, nearly all which have attained any size—are depressed at their centres, and, while roundish or ovoid in character, none of them are pedunculated, a peculiarity which was pointed out long since by Plicque. Upon inquiry, the following facts are elicited:

The patient states that while never particularly uncomfortable, so far as their size and distribution are concerned, he has found that occasionally, sometimes frequently, a great deal of pain is felt in some or several, this pain being very much allied to neuralgia in its character; that is, there is a sharp, shooting pain, which spreads in various directions, and seems to acknowledge the keloidal tumor as a centre for the ramifications of the different areas through which these lancinating pains are distributed. In addition to this, there is itching, which at times is very marked; and besides that, we find the remains of suppuration, not very extensive in character, but rather deep. The patient states that these tumors have suppurated at times and the process lasts for some little time, and it is this destructive action occurring in the central portion of the tumors which produces the apparent umbilication observed. Upon feeling the tumors themselves, it is found that they have peculiar characteristics. They seem to have a doughy feel and to be freely movable upon the subjacent connective tissue; in fact, they seem to be entirely unconnected with the fascia of the muscles, and to be independent of the intimate connective tissue which binds this fascia to the overlying structures. Handling the keloid does not seem to elicit any particular pain; indeed, the patient would not be aware of the fact that the tumors were being handled were it not for the general sensation which is imparted by palpation. When, however, the neuralgic pains are present, the mere act of touching them increases this pain and renders the patient uncomfortable.

Now, to recur to keloid. As I have mentioned to you, it is a

connective-tissue new growth, and it is one which is most often observed in the colored race, although it is sometimes seen in the white. As a rule, it is a traumatic variety which we meet with, but care should be taken not to mistake traumatic or spontaneous keloid for so-called hypertrophic scar. This latter is a condition which follows traumatisms, and consists simply of an hypertrophy of the scar-tissue and hyperplasia of the elements of repair, which, instead of taking the place of the destroyed tumor, take on an increased growth of a low character, and form tumor-like masses of a low grade of vitality, and are very apt occasionally to be painful, and thus to simulate to a certain degree keloid. In traumatic keloid you will find this peculiarity present in the growth. It always assumes the general configuration of the scar upon which it grows or which has occasioned its appearance. You will find, for instance, that where the traumatism has been caused by the lash, where we have parallel destructive lines occurring in the skin, the keloid will assume this same parallel longitudinal appearance. Where the keloid has been occasioned by an operation, you will find that it occurs in the lines or along the scar of the lines of incision; and where the keloid has been caused by a burn, it will follow the configuration of the scars produced by that traumatism. Another peculiarity, which is found not only in traumatic but also in spontaneous keloid, is, that the keloidal tumor, which in the beginning is roundish or oval in shape, changes with time. After a certain period it begins to throw out prolongations from the periphery of the original growth, and, as it occurs most frequently upon the chest, the prolongations have, as a rule, been observed to take place laterally, giving a fancied resemblance to the entire mass of a crab, whence it derives its name,—*kelis*, a "crab." In hypertrophic scar you will find that there is not this peculiarity of conformation. While the growth naturally follows the form of the traumatism which has occasioned it, it still participates in the general characteristics of scars, and limits itself to the traumatism which was produced either by the surgeon's knife or by the accident which caused the injury. You will find that there is no tendency whatever to prolongations being thrown out, as there is in keloid in general, nor is it limited so much to the colored race, being found with equal frequency in the white and in the African. No particular pain or neuralgic hyperæsthesia can be found in it, and, as a rule, we do not find that suppuration ever takes place spontaneously, as occurs in both the traumatic and the spontaneous keloid.

To make a differential diagnosis between spontaneous keloid, traumatic keloid, and hypertrophic scar you will find sometimes a diffi-

cult matter, unless you can rely implicitly upon the history furnished by the patient. If the subject be reliable, the fact of a traumatism will immediately establish a differential diagnosis, so far as spontaneous keloid is concerned, and that can be immediately eliminated or adopted. Then, as between traumatic keloid and hypertrophic scar, you will find that the characteristics of keloid which I have already mentioned will be present to a greater or less degree, and entirely absent from the hypertrophic scar. But cases occasionally occur in which no reliance whatever can be placed upon the history of the patient, and where the number of the tumors is not sufficient to enable the diagnostician to state positively from their appearance as to whether the growth is spontaneous or traumatic, or is positively keloidal in character. Upon palpation, it will be found that keloidal tumors, whether they be spontaneous or traumatic in character, have a certain doughy feel and are slightly lighter in color than the surrounding integument. In the blacks you will find that the color is much paler than that of the normal skin, and in the white race that it has a pinkish appearance. Furthermore, you will find that there is a tendency for the appearance of new arterioles and for a thinning of the skin to exist, whereas in hypertrophic scar if it does exist for any length of time it partakes of all the characteristics of scar-tissue. It is white, even glistening in appearance. It has no skin upon it, since it is scar-tissue, and if any arterioles do exist they will be distributed about the border of the new tissue, and will not occur over the surface, as you find them in keloid. Moreover, the hypertrophic scar does not grow after a certain time: it remains stationary and never throws out prolongations. Keloid has a tendency to grow, and to grow for many years, and after it has apparently attained its growth you will then find that it suddenly begins to throw out offshoots, the so-called crab-like prolongations, which, in their turn, partake of the character of the original tumor.

So far as the pathology of this trouble is concerned, there is but little known up to the present, except as regards its microscopic appearance. You will find that some authors contend that so-called scrofula is the cause, and is always present in those affected by the trouble; but in many cases no constitutional cause can be found at all, and, as in the instance which is before you, the individual seems to be in as healthy a condition as could possibly be desired. Others, again, have stated that the trouble was a fibrous sarcoma, and yet a microscopical examination of this growth fails to demonstrate the presence of any element which would make one suppose that there was any sarcomatous

process taking place within the growth. If we compare keloid, false or cicatricial, and a hypertrophic scar microscopically, we shall find that there is one characteristic, which, to state it roughly, is about as follows, differing in each one. In true or spontaneous keloid the papillæ of the skin remain, showing that there has been no destruction of the cutis vera. It shows that the process is not a destructive one, but a neoplasm. We find that the fibrous tissue which is present is distributed in a vertical manner, as a general trend of the process. Now, if we take spurious keloid we find here a condition which immediately differentiates it from the spontaneous. While the connective tissue has the same general direction, and is distributed in about the same manner, in bundles having a vertical direction, the papillæ are not present. The papillary layer of the true skin has disappeared, and this can be easily explained if we reflect but for a moment upon the origin of the growth. It is traumatic in origin, and the skin has been destroyed in that portion where it took its origin. In the same manner you will find that in hypertrophic scar the papillæ are also destroyed, for, as you are well aware, no papillæ can exist in scar-tissue, because its very existence implies that there has been a destruction of the skin, and that it is simply a substitute for the destroyed portion, the substitute consisting of fibrous tissue, and this fibrous tissue is disposed, too, in bundles of white fibres, whose general direction is horizontal. So that if we take these three conditions into consideration, we have a very easy method of making a differential diagnosis by means of the microscope, and also of arriving at a safer conclusion in regard to the pathological process which has taken place in these various neoplasms. To assume that the trouble is one due to scrofula is entirely misleading, for we are aware now that scrofulosis in general is merely a term to imply a particularly localized form of tuberculosis. Now, in the examination of spontaneous keloid, the tubercle bacillus and other evidences of tubercular infiltration are entirely absent, and hence we cannot conclude that this is a tuberculous growth, nor can we suppose that because an individual is affected with tuberculosis, and has keloid, the latter is necessarily dependent upon his general condition. In the case which you see before you, we have an individual whose lungs are healthy, whose sputum contains no bacilli, in whom no evidence of either generalized or localized tuberculosis can be found. The only point to establish is that it is spontaneous and not traumatic in character. The history might lead one to suppose that it was traumatic, from the fact that he states that the first tubercle began at the site of the vaccination;

but had it been traumatic in character it would have been limited to that site,—that is, to the upper portion of his right arm,—whereas it is distributed over his trunk and limbs; and if we examine his chest and back we find tubercles of all sizes, from those which are barely perceptible to the touch to others which are as large, probably, as a hazel-nut, all of them growing, as he states to us, some having appeared without his knowledge, and at none of the sites where these exist can the slightest evidence of any traumatism be found. In addition to that, he states that in every portion, except that where he was vaccinated, he never received any injury whatever, nor was he cut or scratched, neither did he suffer any solution of continuity of the integument. Taking these facts into consideration (and there seems to be no reason for doubting the patient's statement in this regard), we must come to the conclusion that these tuberculous growths and tumors have appeared spontaneously, as they seem to be doing now, without any apparent cause, and this is certainly proof positive that the trouble under consideration is one of spontaneous keloid. There can be no doubt whatever as to its being keloidal in character, and as there is no doubt as to its causation, we must conclude that it is spontaneous keloid. Such a marked case as the present one is a rarity, and it presents, in addition, almost all the phases which may be observed in the evolution of this neoplasm. We find the barely perceptible tubercle, the one which is larger, the various degrees of size, until we arrive at the extremely large one, which has undergone the further metamorphosis of becoming flattened and assuming more of a scar-like aspect than you observe in the tumors on the arms, for instance, which appear almost sessile, and which have a doughy feel, whereas that upon the chest is rather firmer in consistency. We can see at present certain small suppurating points, such as upon the left side of the keloid of the chest. We can see scars existing in others, such as that upon the right arm, showing where suppuration has taken place before. At present he is not complaining of neuralgia, although he had that and itching a few days since. If there be any cause for this growth, a neurotic disturbance would probably account for it better than any other, and the general distribution would seem to favor this, were it not for the fact that the one occurring upon the chest crosses the median line, and thus immediately nullifies any theoretical considerations which might be connected with nervous trunks, and consequently destroys any supposition that might attach, or any importance which we might give, to a neurotic origin for this growth.

Now, the treatment is something which so far has proved entirely

ineffectual, not only in spontaneous keloid, but in the traumatic form as well. Every method imaginable has been employed, and always unsuccessfully. One of the cardinal qualities which this neoplasm seems to possess is that it will always recur. If, for instance, you take spontaneous keloid and destroy it with a caustic, cut it out with a knife, decompose it by electrolysis, or use any other method for its extirpation, you will find that as a natural result a scar will be produced, and you will not have succeeded in destroying the keloid, but you will have a change taking place, in this: that instead of a spontaneous keloid, you will have given rise to the development of a traumatic keloid, which may or may not become larger than the original tumor was. There seems to be a certain predisposition existing in the individual which results in the regeneration of this peculiar neoplasm. In the case of the traumatic keloid you will find that, as in the spontaneous, no matter what methods you may employ in order to secure its disappearance, the effect will be only temporary, and the ultimate result will be a recurrence of the original growth. In the same manner as in hypertrophic scar, if you cut out the scar you will find that in the majority of cases another hypertrophic scar will form. This shows that there must be some predisposition of the tissues which leads to a regeneration of the process, how or why we cannot explain, but that it does exist is confirmed by the practical experience of those who have endeavored to procure the disappearance of these growths. In the present case it would be rather difficult to eliminate the growths, as you see the involvement of the integument is so great that it would be dangerous to remove all these keloidal tumors. The patient is satisfied so far as cosmetic appearances are concerned. All the tumors, with the exception of the one on his left cheek, are covered by his clothing, and that one, although it is steadily growing, incommodes him but little. Still, he is willing to have that extirpated, and the only hope which can be held out to him is that of an operation which will be comparatively extensive, which will dip down into the normal tissue and go wide of the tumor, a scar being formed which in comparison with the growth will amount to practically very little. At the same time, it will give us an opportunity of being able to examine this tumor microscopically, and perhaps of establishing some point which may have been overlooked.

To sum up. The case is a unique one. As a case of spontaneous keloid, it is the most extensive that has ever been figured, probably, and one which is seen but once in a lifetime. It is instructive, from the fact that it demonstrates very clearly the fact of spontaneous keloid,

the manner of its growth, the manner of its evolution, the phases through which it passes, the various processes which it may undergo, and the amount of surface which may be involved without distressing the subject of such a condition. It inconveniences the patient so little that he plies his vocation, that of a violinist, without ever being incommoded, and whenever he has attacks of neuralgic pain his right arm suffers no more than his left, and sometimes it is neither one, but those portions which would naturally be supposed to offer the least opportunity for the development of such subjective symptoms,—viz., the facial tumor or that upon the chest.

The patient will be kept under observation, and if any new developments should appear, he will be presented to you again, in order to show them, although it is very probable that nothing of that character will occur, except so far as the enlargement and growth of the tubercles, which are now apparent, are concerned.