

ON THE
KELOID OF ALIBERT,
AND ON
TRUE KELOID.

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THE term *keloid*, or *keloïde*, the name given to the singular affections of the integument about to be described, has been variously interpreted; some deriving it from $\kappa\eta\lambda\eta$, a tumour; others, in reference to certain supposed resemblances, from $\chi\eta\lambda\eta$, a crab's claw; or from $\chi\epsilon\lambda\upsilon\varsigma$, a tortoise; whilst others, apparently with much greater propriety, derive it from $\kappa\eta\lambda\iota\varsigma$, 'quasi ustione facta macula,' the disease in every instance presenting a greater or less resemblance to some one of the diversified effects left by a burn.

The more immediate object of this very slender communication, is to show that the keloid originally described by Alibert, and now so generally recognised, is altogether different in its mode of development, character, and progress, from another disease occurring in the same tissue, and to which, with much greater aptitude, the term keloid may be applied, if we are to regard resemblance to the effects of a burn as its correct interpretation; for I think it will be shown, that whilst the keloid of Alibert and others can hardly be regarded otherwise than as a fibrous tumour developed in the subcutaneous areolar tissue, the other form of disease to which I have alluded, although originating in the same tissue, is of a character and leads to consequences

widely different. In order, however, to illustrate and confirm this proposition, it will be necessary to give a description of both diseases; and in so doing, I will, as far as possible, avoid trespassing too much upon the time and attention of the Society.

I propose distinguishing the two diseases in question by the terms "*Keloid of Alibert*," and "*True Keloid*."

KELOID OF ALIBERT.

I have given the name "*Keloid of Alibert*" to this form of disease, because I believe Alibert to have been the first to discriminate and accurately describe it. In his celebrated work, '*Description des Maladies de la Peau*,' will be found a very accurate representation of it, executed with all the artistic skill, and perhaps a little of the exaggeration of colouring, for which that work is so remarkable. He there suggests its holding a middle place between what he so vaguely and indiscriminately calls "*dartre*" and cancer, and was led in consequence to give it the name of "*cancröide*," like cancer; further justifying the appellation, however, by comparing, as others have done, the claw-like rays or processes of the extending disease to the claws of a crab. Since the period of Alibert's original publication, several other writers have furnished cases and commentaries to illustrate the character, progress, or pathology of the disease. Amongst these we find the names of Biett, Velpeau, Cazenave, Coley, and others; but by far the most complete and elaborate essay on the subject has only lately been written by Dr. Dieburg, of Dorpt, and published in the '*Deutsche Klinik*' at Berlin, and for a knowledge of which I am indebted to my colleague Mr. Birkett and Dr. Whitley.

The keloid of Alibert first appears in the form of very small, hard, shining, tubercular-looking elevations, of a roundish or oval shape, somewhat firmly set, of a dusky or deep red colour, and generally attended with itching or pricking, shooting or dragging pains in the part. These tumours slowly increase until they attain a height of two or three

lines, and comprise an area varying from that of a horse-bean to that of a small almond. So long as they continue to be abruptly prominent, the summit, or even the entire surface of each tumour, instead of remaining uniformly red, not unfrequently presents a pale or blanched appearance, as if from pressure of the increasing tumour upon the cutis situated above it, and which might at first sight be mistaken for some sort of fluid effusion. On close inspection, however, it is found, that so far from this being the case, the tumour displays a hardness, firmness, and elasticity, which almost convey the notion of so much fibro-cartilage, to which indeed it has been not unaptly compared. After an uncertain period, these hard shining tumours become broader, of more irregular outline, and occasionally slightly depressed in the centre. At this time, and sometimes even earlier, by the aid of an ordinary magnifying glass, or by the naked eye, delicate whitish tendinous-looking lines may be perceived, stretching across the surface of the tumours, mingled with minute blood-vessels of a bluish, purplish, or pinkish colour. The extension of each individual tumour now seems to be effected by certain tapering claw-like processes of seldom more than from half a line to a line in breadth, and probably from a quarter of an inch to as much as an inch in length, proceeding from the edges or angles of the expanding tumour. These claw-like processes appear to produce a puckering of the skin; and, as it were, draw the healthy integument into which they pass, towards the original excrescence, and within the influence of the local changes; appearances, nevertheless, which are probably the mere consequences of the stretching and dragging of the integument occasioned by the increasing size of the tumour beneath.

The slow and gradual increase of these tumours may proceed for months or years, and at last attain a size of an inch, an inch and half, or two inches in length, as much as half an inch or an inch in breadth, and probably an elevation of three or four lines above the level of the surrounding skin. There may be but a single tumour, or there may be several: when more than one, they may be congre-

gated together in the same neighbourhood, or may occupy parts of the integument remote from each other: when of the largest size, the tumour may so stretch and attenuate the integument as actually to protrude beyond it, exposing a red shining excoriated looking surface. The development of the tumour is occasionally preceded or accompanied by heat, and some degree of puffiness or tumefaction of the surrounding parts, but without redness or other discoloration; a state of things, indeed, which may temporarily supervene at any period of the disorder, either in consequence of some accidental cause of general excitement, some irritation applied to the tumours themselves, or spontaneously, and without any very appreciable cause whatever.

From the very commencement, as has been already observed, the disease is attended with itching and pricking sensations, which, as the former increases, are aggravated to a sense of constriction, or to severe pricking or stabbing pains, which prove extremely distressing to the patient. Under such circumstances, pressing or handling the tumour is loudly complained of; the sufferings of the patient, if a female, are not unfrequently such as to harass her during the whole of the day, and almost completely to deprive her of rest at night.

The morbid deposit which essentially constitutes the keloid of Alibert, takes place in the subcutaneous areolar tissue, between the cutis and adipose membrane. The occasional heat and tumefaction of the neighbouring integument, as well as the itching pain and redness of the tumour itself, sufficiently attest that the morbid process is at least accompanied by a degree of vascular excitement nearly allied to inflammation, an inflammatory state which, it would appear, gives rise to a certain amount of adhesion amongst the meshes of areolar tissue around; and, as we know that tumours of considerable size may be developed in the subcutaneous areolar tissue without either uneasiness, pain, or any very obvious change in the appearance of the skin itself, I am inclined to attribute to this accompanying inflammatory and adhesive process, the fixed condition of the tumour, the

great vascular injection of the superincumbent skin, and the intensity of the local pains, as well as those remarkable puckerings of the integument which attend the increase of the tumour, and constitute the claw-like processes from which some have derived the name "keloid."

The disease most frequently attacks females from the age of 18 to 35 or more, and in a large majority of instances is found situated near the sternum, between or upon the mammæ; it nevertheless occasionally affects the male, and in both sexes has been known to occur on other parts of the body, as the arms, shoulders, neck, belly, or even the head or face. Alibert, as already observed, considered it in some way allied to cancer; an opinion unsupported by any facts with which I am acquainted; whilst others, with perhaps no better evidence, have attributed the predisposition to a scrofulous taint. The development of the disease in different parts of the integument at the same time, or in succession, and its almost certain recurrence after extirpation by the knife or by caustics, clearly point to some peculiar constitutional condition; but what that condition is remains to be ascertained. All that we at present know respecting the exciting cause of the disease, amounting to no more than the fact, that, instead of arising spontaneously, on parts to all appearance previously sound, as is commonly the case, it has not unfrequently been observed to be developed upon and apparently excited by a cicatrix, as of a burn, a boil, or a recent wound, such as that inflicted by the punishment of flogging. To the disease, when occurring under the latter circumstances, Alibert, in a subsequent work, applied the term *spurious* or *false keloid*—the *cicatrix keloid* of Dieburg—a form of the complaint, however, which is sometimes altogether painless.

CASE I. (Pl. 158⁵⁰, Model 231¹⁰, 231¹¹)¹ reported by Mr. Pratt.—Susannah Black, æt. 18, a single person, who has been residing with her mother, at Snowfields, was admitted on the 6th October, 1853, having been transferred from

¹ The references are to plates and models in Guy's Hospital Museum.

No. 5, Mary, by permission of Dr. Babington, under whose care she had been since the 14th ult.

She is below the middle height; has dark hair, eyes, and complexion; a narrow forehead and heavy expression; but seems intelligent and is highly hysterical, and was formerly apprenticed to a laundress, but not strong enough to continue this occupation.

Her catamenia first appeared at the age of 15, and have recurred regularly since, generally continuing about three days, but with pain in the back and loins, and during the last two years with clots, sometimes of the size of a shilling.

Her father died of diseased heart, but the other members of her family are healthy, and none of her relations have ever suffered as she now does.

She is marked by the smallpox, which she had when three or four years old, but does not look unhealthy, and states that she was always in good health until about two years ago, when, from exposure to cold at Gravesend, while lightly clad, she first became ill, with pain in her head and right side, and at the scrobiculus cordis, shooting thence to the back. Six weeks after this, in Berkshire, having been gradually getting worse in the meanwhile, with loss of appetite and increase of pain, which for a time was so severe as to keep her in a bent position, but occasionally left the scrobiculus cordis and appeared in the loins, she suddenly vomited about a pint of dark clotted blood, after which she became better, but did not lose the pain in her back, and suffered from palpitation of the heart. About three months after this, having returned to London in the interim, the vomiting of blood recurred, and from this time was repeated at intervals, sometimes of two or three months, at others of two or three weeks only, until a few days before admission; and once in the hospital, about two weeks since, she brought up a teacupful of blood.

About twelve weeks since she had a gathering in her right breast, which discharged a small quantity of matter; two weeks after, and just as this was healing, her neck, chest, and both breasts swelled a good deal, with a dull

aching pain, but without œdema; one week after this, or two or three days after the swelling had subsided, she first noticed two small red pimples on the right breast, at its upper and inner part, which were painful, with a pricking sensation, and tender. Then, about one week after, two other similar raised spots, appeared on the left breast, at about the same position, but not symmetrical, and then two smaller ones above these; these all gradually increased in size; but in varying degrees, and, as they did so, at certain stages of their existence became white (?)

There are at present two raised spots on the right breast, nearly oval in shape, and of considerable size; four on the left breast, two large and two small; one on the upper part of the sternum; several at the upper part of the abdomen; and one on the left shoulder; and a cluster of equivocal white spots at the lower part of the back on the right side.

They seem to be in every stage of existence; some small, red or white; others of varying size, more vascular, generally of a red colour, and marked with small venæ, and traversed by peculiar white lines; but they all change colour occasionally (?) from white to red or even purple, and have a peculiar, firm, and unyielding feel. They have always a dull and aching sensation, converted into a more acute pricking pain by pressure; are more or less raised above the level of the surface, the largest as much as one eighth of an inch, or even more; have irregular margins, much resembling the contraction of a cicatrix, and appear to increase in size by an extension of the white lines which traverse them into the surrounding tissue, like feelers, to which, indeed, their irregular margins are due.

Her chest is well formed, her nutrition good; she seems to be subject to boils; has old cicatrices of venesection on each arm, and a small hard nodule on the left side of the neck, just above the sterno-clavicular joint, resembling an enlarged gland. Her tongue is white and moist; her pulse 80, full and regular; her countenance rather flushed; her bowels, which have been much relaxed, now act about three times daily, the motions being very loose; her appetite is bad;

she complains of pain in her head, across the top. The sounds of respiration and of the heart are normal, as well as the resonance of the chest on percussion, but the heart's impulse is strong and heaving, and the pulsations of the aorta felt above the sternum.

CASE II (Model 229, pl. 158⁵⁷, pl. 158⁵⁴), furnished by Mr. Whateley, surgeon, of Berkhamstead.—William Garrett, æt. 37, applied to me, about May, 1851, with a small tumour on the skin of the left breast, slightly elevated above the surrounding skin, silvery red in appearance, exquisitely tender, and about one inch in diameter. I recommended its removal, to which he would not then consent. On seeing him about a month afterwards, there was a second appearing, about an inch from the first, and subsequently a third. Such being the case, and fearing that others might still appear, I did not think it advisable to press the operation. He was then sent to Guy's Hospital, at the request of the late Bransby B. Cooper, Esq., in order that a model, &c., might be taken of the tumour in its then state.

After remaining some time, he again came into the country, and was under my care at the West Herts. Infirmary.

The tumour still continuing to grow, and the three having coalesced into one, and having no appearance of any fresh growth in the neighbourhood, I again advised an operation, to which he consented, and I removed it on the 10th of May, 1852, removing with it about a quarter of an inch of the sound skin all round, and fully down to the bone. The wound was dressed with warm water dressing and oil-silk, and was cicatrized. The cicatrix is now sound, and the man in good health.

The tumour, when freshly cut through, in structure, colour, and appearance most nearly resembled a cow's udder.

The slight sketch, No. 4, represents the result of a microscopic examination of the tumour, made, however, under very unfavorable circumstances, by Dr. Habershon, of Guy's Hospital.

A more minute and careful examination of a keloid

tumour has been supplied by Dr. Dieburg, of whose account of it the following is a translation :

“ On section we observe a dull white colour, a dense tissue in which fibrous structure is visible to the naked eye, and a creaking sound is produced by the knife. On pressure, no fluid exudes in most cases ; in a few, a watery fluid is seen, sometimes reddened by blood. This is characteristic, as different from the ‘*tumores verrucosi cicatricum*’ of C. Hawkins, from which a peculiar fluid may generally be expressed. Microscopical examination shows the different stages of development of the cells and fibres. We distinguish—1. More or less rounded bodies, the largest 0·05 of a millimetre ; in their interior, we see a nucleus, and frequently other molecules. 2. Cells elongated in the direction of one of their diameters, in great numbers : they seem to constitute a characteristic element of all the tumours of ‘*cicatrix-keloid*’ (spurious keloid of Alibert). These cells, called by Follin ‘*elliptical bodies*,’ are rounded at their extremities, and their sides present central bulging. These cells are about 0·01 millimetre in breadth, and 0·06 in length. They contain a nucleus easily distinguishable by its brightness from the dull surrounding parts. 3. Spindle-shaped bodies, bulging in their centre, and having long, waving appendages. 4. Fibres of cellular tissue and elastic fibres. The fibres of cellular tissue are formed into bundles, which cross each other, and constitute a pretty dense web. The elastic fibres are less numerous and larger than the latter, and are not easily seen without immersion in acetic acid. When a slice of keloid in an early stage of development is placed under the microscope, it is found to consist almost entirely of the spindle-shaped bodies ; at a somewhat later period these are seen to have lost their nuclei, and assumed a fibrous appearance : this is most frequent. At a still later period, we see distinct fibrous bundles, crossing each other, and by immersion in acetic acid, the elastic fibres become visible. The whole is nourished by a comparatively small number of blood-vessels. The surface is covered by a very thin layer of epidermis, consisting of tessellated cells, very

closely pressed together, which require softening before they become visible under the microscope.”

The following translation from M. Labert's 'Traité pratique des Maladies Cancereuses, et des affections curables, confondues avec le Cancer,' will probably not be considered out of place.

“Among the cases of spontaneous and multiplied keloid that we have observed, there were two especially curious, in consequence of their multiplicity and extent. In one case, under M. Velpeau, at “La Charité,” the whole pectoral region of one side was covered with these tumours; many of which were sufficiently large to have reddened and eroded the surface of the skin at their borders.

“In the second case, a child $\text{æt. } 10\frac{1}{3}$, had a very great number of keloid tumours, developed upon its back, red on their surfaces, and which had formed in the cicatrices which were consecutive to numerous applications of caustic potash, applied to the poor child by a charlatan, who promised to cure, by this method, a scrofulous disease under which the child laboured.”

I may add to this passage from Lebert, the fact, that I have myself very recently been consulted in the case of a young lady of about eighteen years of age, upon whose back, shoulders, and breast, I counted as many as thirty keloid tumours. I was told that they originated in the cicatrices of boils which broke out about six or seven months before. From the situation, it had been a case probably of *acne*.

In regard to treatment little can be said. Various internal and external remedies have been tried in vain; and when extirpated by the knife or destroyed by caustics, the disease has, I believe, very generally returned on the seat of the original disease. When, however, the disease has been first developed in a cicatrix—the spurious keloid of Alibert—extirpation has proved more successful, the disease not having again made its appearance in several instances. It has indeed been asserted that the keloid tumour may subside spontaneously, leaving behind a white and depressed cicatrix; but I

believe this to be extremely rare, and is in itself a very improbable event, after the tumour has attained any considerable size.

TRUE KELOID.

What I have ventured to call "True Keloid" presents a very remarkable character, and leads to much more serious consequences than the keloid of Alibert. It is a disease, too, which, so far as I know, has not hitherto, with the exception of a slight allusion of Dr. Coley, been either noticed or described by any writer. Like the keloid of Alibert, it has its original seat in the subcutaneous areolar tissue, and is first indicated by a white patch or opacity of the integument, of a roundish or oval shape, and varying in size from that of a silver penny to that of a crown piece, very slightly or not at all elevated above the level of the surrounding skin, and probably unattended, in the beginning, with pain or any other local uneasiness or inconvenience, although a more or less vivid zone of redness surrounding the whole patch, or a certain amount of venous congestion in its immediate vicinity, sufficiently attests the vascular activity or inflammatory process going on in the parts beneath. Occasionally, and especially when the original white patch is of considerable diameter, its surface presents here and there a faint yellowish or brownish tint communicating to the whole spot a somewhat mottled appearance. The slow and insidious change taking place in the areolar tissue either stops and the spot disappears, or it proceeds, and at length begins to declare itself by a feeling of itching, pain, tightness, or constriction in the affected part, and frequently by a certain amount of subcutaneous hardness and rigidity, extending beyond the site of the original superficial patch, although as yet without any necessary change in the appearance of the superincumbent skin. This hardness and rigidity can be distinctly felt, and, especially when situated on the extremities, may sometimes be traced along the course of the neighbouring tendons or fasciæ, or stretching like a

cord along the limb, so as to bend or shorten it, and even interfere with natural progression. At length the part originally affected becomes more or less hide-bound, and a similar change taking place around the more superficial fasciæ and tendons, the latter become so tightened, fixed, and rigid, as to be no longer capable of performing their proper functions, and to such an extent, that the whole of a limb, but especially the fingers, may be permanently contracted, bent, and rendered almost as hard and immoveable as a piece of wood; thereby impeding progression, distorting the gait, and making the patient, a poor miserable cripple for the remainder of his life.

As these changes proceed, the patient continues to experience itching, pain, or a sense of tightness or constriction of the parts, till at length the disease begins to tell upon both cutis and cuticle. The skin, which may have previously presented only a slightly drawn or puckered look, imparting, to a greater or less extent of it, a ray-like appearance, now shrinks or shrivels; it assumes a dry, smooth, or glistening aspect; it undergoes a more decided change of colour, becoming reddish, pinkish, yellowish, or of a dead leaf colour; the cuticle exfoliates; the cutis manifests a tendency to superficial ulceration or excoriation, with consequent scaliness or scabbing, or, when not excoriated, is occasionally surmounted by obscure tubercular or nodular elevations—the whole appearance very closely resembling the remains of an extensive and imperfectly cicatrised burn. From some part of the boundary of the discolored and shrivelled skin, there may now and then be seen reddish, elevated, claw-like processes, of from half an inch to two inches in length, extending into the sounder integument, and bearing a very exact resemblance to those mentioned as being so characteristic of the keloid of Alibert. It must also be observed that, during the progress of the disease, it is by no means uncommon to find, scattered over various parts of the apparently sound surface, certain oval or roundish and flattened tubercular-looking elevations, which are somewhat hard to the touch, about the size of a split

pea or horse-bean, and without any other discoloration than what appears to be the result of accidental friction or irritation.

The above description of true keloid clearly points to some morbid change slowly taking place in the subcutaneous areolar tissue, whilst the itching, pain, and uneasiness experienced by the patient, the red zone surrounding the patch, and the injection of the neighbouring veins, as well as the subsequent appearances presented by the parts affected, would indicate that the morbid process going on in that tissue is one very nearly allied to inflammation, probably of a strumous kind. It would also appear that the inflammatory product, by its subsequent contraction, seriously interferes with the proper nutrition of the cutis, fixes it more or less firmly to the parts beneath, and, when deposited in the immediate neighbourhood of fasciæ and tendons, may, probably, after the lapse of months or years, lead to all those serious inconveniences which I have already described.

I will not abuse the patience of the Society by entering into any speculations respecting the origin and essential nature of this very singular disease; neither is it necessary to dwell upon plans of treatment, further than to observe that, with the exception of iodine, none of the many remedies tried, seemed, in extreme cases, to make the slightest impression upon either the appearance or the progress of the disorder. In one instance, however, less advanced, iodine, taken internally, with the simultaneous application of iodine ointment to the affected parts, did appear to arrest the advance of the local changes, and somewhat lessen the rigidity of the affected tendons. Whether the preparations of iodine administered at a very early period of the disorder would prove more effectual, I have had no opportunity of ascertaining, although I am inclined to entertain a strong opinion in its favour.

The following case presents an example of the disease in its earlier stages:

CASE III (Models 222, 223, 224, Pl. 158⁵²), reported by Mr. Towne.—Eliza Watkins, a young woman between 19 and 20 years of age, of ruddy complexion, fleshy and well looking, with light eyes, and hair tending to red, presented herself amongst the out-patients of Guy's Hospital early in June last.

She was in the situation of lady's-maid, and had for some time been residing at Cheltenham. Her general health was good, and at this time apparently undisturbed. She had been suffering from pain and stiffness in the left arm and left leg, for which she was now seeking relief.

The first appearance of the disease had been noticed twelve months previously, when a small white spot, about the size of a shilling, was observed on the left side; but, as neither pain nor inconvenience accrued, no anxiety was felt with reference to it until about eleven weeks prior to her appearance at the hospital, when she first became sensible of pain, attended with a dragging sensation in the left arm and left leg, both limbs being affected simultaneously. Medical assistance was now called in; poppy fomentations were ordered, and for some time persisted in; the disease still making slow but steady progress.

The lady with whom she was living, having occasion to visit London, brought the young woman with her, and took the opportunity of having a second opinion. The case was now treated as a sprain; but the patient, not feeling satisfied, determined to come to the hospital.

The two limbs were in a very similar condition. At this time they presented to the eye but slight indications of the disease, which principally consisted in a hard, drawn, tight look, on the limb being extended; there might, however, be felt, through nearly the whole length of both arm and leg, a rigid band, which gave to the touch the impression of some inelastic substance tightly strained under the integument.

The shoulders presented a mottled appearance, and had several whitish patches interspersed with numerous small tubercular-looking growths. There also existed a chain of

spots which nearly surrounded the right nipple, and several others about the neck and breasts. The spot on the left side (described as the first appearance of the disease) had now attained the size of a five-shilling piece, and had thrown out a band upwards towards the cartilage of the ribs, and a second descending towards the pubes.

During the second week in August, I again saw the patient. The pain in the arm and leg had much increased, with "a feeling of shortening" in the limbs affected; and, after sitting for some time, it was with difficulty the foot could now be extended. The band down the arm had become more distinctly expressed, had assumed a slightly tendinous and glistening character, and had thrown out several small lateral processes. A fresh spot had appeared on the upper lid of the left eye, and a second on the outer side of the right leg. Those on the shoulders had become more evident; the larger one had increased in size, become yellowish in colour, glazed on its surface, was hard to the touch, and did not move freely with the surrounding integument.

The next case exemplifies a more advanced stage of the disease:

CASE IV (Model 225, Pl. 158⁴⁶), reported by Mr. King.—Louisa Burston, æt. 11, was admitted, under Dr. Addison, December 8th, 1852.

The patient, who is a very strumous-looking subject, was very strong and healthy as a baby, but was noticed to be slightly ricketty when she began to walk; this was between eighteen months and two years of age; but when she was three and a half or four years old she had nothing remarkable about her.

From this time her mother always considered her delicate; but, beyond frequent attacks of ophthalmia, which have deprived her of most of her eye-lashes, and appear to have been of a strumous character, she has never suffered any decided illness.

Attention was first directed to the right thigh, about

fourteen months ago, on account of complaints on the part of the child of itching in that situation ; and this appears to have been so intense, that measures were taken, by tying her hands, &c., to prevent her flaying herself. When first examined, red spots, like flea-bites, were observed thickly studding the inner part of the thigh, about its middle third, but not imparting any feeling of elevation to the finger.

This condition lasted about a fortnight, and was then succeeded by a flaky desquamation of the cuticle, which persisted for two months, during which time the itching continued to be almost intolerable, and when the part was scratched the spots before alluded to would reappear. About or soon after this time the part began to feel thickened, puckered, and hard, and gradually assumed its present appearance.

On the right thigh, about one inch below Poupart's ligament, and nearer the spine of the pubes than the crest of the ilium, commences this singular appearance of the skin, which more nearly resembles the scar left by a burn than anything else. There is a strip, about one inch broad, nodulated and irregular on its surface, and discolored in a peculiar manner, being partly red, with a predominance of a light brown tint.

This strip of disease proceeds down the thigh, following the course of the sartorius muscle as far as the junction of the upper two thirds with the lower third of the thigh, at which point the most marked discoloration of the skin ceases ; but it is found, by examination with the finger, that the same condition of the cellular tissue follows the sartorius to its insertion, and also appears to involve the tendons of the internal hamstring muscles.

In the lower part of the same leg the cellular tissue over the anterior part of the ankle appears to have become involved, and, in particular over the internal malleolus, the integument is firmly attached to the bone.

She has at the present time no peculiar sensation in the affected parts, nor is the use of her leg in walking at all impaired.

Since she has been in the hospital she has taken various medicines, without the slightest perceptible effect.

The next is an instance of the disease in its most aggravated form, reported by Dr. Collingwood. (Model 228, 227, pl. 158⁵⁵, 158⁴⁵.)

Elizabeth Alexander, æt. 12, resides at Ellirfield, in Hampshire, where her father follows the occupation of shepherd. She has a comfortable home, plenty of wholesome food, and attends the village school. The following account is given by the gentleman under whose care she has been for some years.

“When I first saw Elizabeth Alexander she was about 4 years old, and was a robust, healthy child, and has been in good health up to the present time. When nine months old, she, whilst crawling about the house near the fireplace, touched a piece of hot iron with the left arm, between the elbow and wrist, which soon healed up, leaving a slight scar, not so large or deep as that produced by vaccination, and to my own knowledge she has had no other burn or scald. When seven years old she had a mild attack of measles, which was so slight that she was not confined to her bed for a day, and perfectly recovered from it. A few months after the measles, she had a white spot appear on her left side, below the breast, about the size of a fourpenny piece, with a brownish, hard, inelastic state of skin, about the size of a five shilling piece, surrounding the white spot, and looking as though the skin had been scorched with hot iron, and I asked the question if such had been the case, and was assured by both mother and child that it was not; and in a few weeks I found the brown part of the skin extending to a large circumference, very much more thickened, puckered, and inelastic, giving no pain on pinching up the skin, or on pressure. About six months after, a similar spot made its appearance on the left shoulder, and from a note I made of the case twelve months after, the following were the appearances then presented.

“The shoulder had been affected for a year and a half.

About a year and a half ago a white spot appeared upon the shoulder, surrounded by a brownish discoloration, just as though it had been touched with a hot iron, not painful or tender to the touch; it has gradually extended itself around the shoulder joint and down the upper third of the arm; the skin is shining, hard, and puckered, like the cicatrix from a burn, and the deltoid and other muscles of the shoulder are so diminished as to leave no appearance of their form; the skin thickened, and apparently adhering to the bone, with considerable loss of power and motion, and contraction of the arm.

“About eighteen months after, the hip (left) became affected exactly in the same manner as the side and shoulder. Two years after this, the right shoulder was the seat of mischief of the same nature as that already existing in the other regions.”

From the above account, then, it appears that the disease commenced in the left hypochondriac region, next attacked the left shoulder, then the left hip; up to this time, upwards of four years from the first appearance of the disease, the *right* side was unaffected, while nearly the whole of the *left* side was contracted by it. About a year before her admission the right shoulder became the subject of this singular disease, and, on a careful examination I discovered upon her right thigh a small patch of puckered skin about as large as a sixpence, the right leg and thigh being otherwise free. Of the existence of this small patch the patient was ignorant, which was suggestive of its being the commencement of the disease in a hitherto sound part; but on careful watching, for a period of several weeks, it does not appear that it has increased in size, but rather to have diminished, and the patient affirms that whereas the disease has steadily increased as a whole, individual spots or small patches have made their appearance for a short time and have receded again.

On November 10th, 1852, she was admitted into Guy's Hospital, Lydia 18, under Dr. Addison, when she presented the following appearances. The right shoulder is contracted,

hard, and tuberculated, the muscles are wasted, and a strip of skin, about one inch and a half wide, extending from the back of shoulder to the inner part of the elbow, is bound to the bone. This part was formerly ulcerated, and the only part which ever was so. It now presents a scaly appearance, and is very hard. The left shoulder is more tuberculated, and more hide-bound, but the disease on this side is more confined to the shoulder proper, and does not extend far down the arm. On the front of each shoulder is a considerable patch, but the chest is otherwise free. Both the elbow joints are tightly contracted, and permanently bent at nearly a right angle, and the forearms and hands are considerably wasted. The fingers are nearly all bent inwards, and the hands are small, like those of a child six or seven years old.

From the lower angle of the scapula, a semilunar patch (the original disease) runs round to the mesial line, half way between the umbilicus and the nipples. A large irregular patch exists on the left side, immediately below the umbilicus.

The outside of the left thigh is affected throughout its whole length, together with the whole of the left buttock; the left calf is wasted, and measures two inches in circumference less than the right, while the right thigh measures two inches and three quarters more than the left. The left foot is contracted, and the ankle stiff; the toe is pointed downwards, and she walks upon the ball of the toe.

The right thigh is free from the disease, except a small irregular discoloration about as large as a sixpence, on the front of the thigh. These hard shining places have diminished sensibility, and never were painful. None other of the family ever was affected with the same disease. Her general health is excellent.

Case of Keloid disease. Furnished by John Birkett, Esq., surgeon to Guy's Hospital. (Models 220, 221, pl. 158⁵⁶.)

E. K—, æt. 31, a female, was born in Devonshire, lived

some years in the country, but the greater part of her life has been passed in the suburbs of London.

She married at the age of 15 years and 8 months, was confined with her first child at 16 years and 8 months, and never menstruated until after her marriage. She has given birth to eight children, all of whom she suckled with both breasts, although most with the left.

Of regular and temperate habits; she has of late subsisted, since the death of her husband, by working a mangle.

She has always enjoyed good health, with the exception of palpitation of the heart; and her aspect was formerly healthy. At present she is pallid and careworn, from anxiety, and a scanty means of subsistence.

I first saw this patient in July, 1851, through the kindness of Dr. Bossey, of Woolwich, who had watched the case.

In December, 1850, and whilst suckling her last infant, she felt an acute pain under the right arm, and observed a curious appearance in the skin of the part.

Now, July, 1851—six months from the discovery of the disease—it occupies a surface of about six inches by three in extent. It is situated on the axillary half of the right mamma, and extends into the right axilla. The skin feels rigid, as if the tissues were of the nature of parchment. It exhibits a peculiar corrugation, resembling that state of the integuments known as “*cutis anserina*,” in an exaggerated condition. It is of a peculiar dull, yellowish tint, resembling that of ivory. The part is painful; often there is numbness, and at other times sharp, tingling, shooting pains. The right nipple is retracted—more than usual, for it has never been so well developed as the left.

A patch of the same disease, about one inch square, is developed in the skin of the left axilla.

In the summer of 1852, a third patch was developed, in the skin of the inside of the left arm.

At present—and I saw her in January, 1854—the diseased patches of skin have but little changed their appearances.

They have all increased a little, they all give her more or

less pain, and no treatment hitherto adopted has produced any beneficial result.

The patch on the right breast and axilla is longer; the nipple is deeply retracted, indeed invisible, and the gland atrophied. She is much more obese than when I first saw her, and her general health is very good.

The application which seemed to afford her the most relief was the liquor plumbi diacet. dil.