HISTORY
OF AN
EXTRAORDINARY ENLARGEMENT
OF THE
RIGHT LOWER EXTREMITY;
WITH
A DESCRIPTION OF SOME MORBID CHANGES IN THE PAPILLÆ
OF THE CUTIS.
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SEVERAL cases are recorded, in which a very great and permanent enlargement has taken place in one or other of the extremities : one in particular, of the right upper extremity, is described in the fifth volume of Haller's *Disputationes Chirurgicæ* ; but I have not yet met with any instance exactly resembling the following ; which, on account of the extraordinary magnitude of the limb, and the curious alteration, which was produced in

some parts of the cutis, will, I hope, appear worthy the notice of the Society.

December 15, 1803, I was desired to visit Sarah Rogers, who was then 46 years of age, and had been labouring fourteen years under an enlargement of the right lower extremity. The disease had existed nine years before the limb became so unwieldy as to prevent her going about; but for the last five years, she had been entirely confined by it. It had continued gradually to increase in size; so that at the time I first saw her, it measured three feet six inches round the middle of the thigh, and two feet round the calf of the leg. The whole length of the limb measuring from a little above the great trochanter of the thigh-bone, was three feet three inches; at this part the enlargement terminated by an almost definite line.

The bulk appeared to arise chiefly from an extraordinary growth of skin and adipose membrane; for both the knee and ankle joints retained as much flexibility, as so enormous an increase of the substance surrounding them could possibly admit: nor was any particular pain produced by attempting to move them.

The enlargement was proportionally greatest in the skin on the top of the foot, which was so immensely expanded as to project several inches beyond the toes, overhanging them, so that all, ex-

cept the great toe, were embedded in it. On the under surface of the foot and toes, and also on part of its upper surface, the skin had yielded irregularly, and in some parts it was elevated into tubercles which were exquisitely sore, and many of which from time to time withered at the base and dropped off. The cuticle was every where thin and chapped. In some parts, particularly at the bottom, it was sodden, being continually moistened by a serous fluid, which was discharged from almost the whole surface of the limb, and which, by its quantity, greatly impaired the patient's strength. The whole surface was inflamed and tender, and she was at times in considerable pain, though not so much as the magnitude of the disease would have led one to apprehend. The left leg was not at all enlarged in any part.

She informed me that the swelling first arose after a labour; which, it seemed, was succeeded by an attack of the *Œdema Puerperarum*, or, as it has been called, *Phlegmasia Dolens*; this somewhat subsided, but never completely disappeared. After she began to go about, the tumefaction again augmented, and extended higher, and from that time it gradually continued to increase in bulk, and to become more painful, till it had attained the magnitude and appearance I have described.

No material alteration took place after I first saw her, till about a fortnight before her death, when a

small portion of skin sphacelated, at the extremity of the projection from the foot ; and at the aperture formed by this occurrence, a considerable quantity of serous fluid drained off from the cellular membrane, by which the size of the limb was in some degree reduced, but not so much as might have been expected. She lingered till Sept. 28, 1804, when her sufferings terminated in death.

My friend Dr. Jackson was so good as frequently to visit the patient with me, and at his request, an artist of no common attainments took a whole length figure of the poor woman, in which every circumstance of proportion, colour and appearance, is most accurately portrayed*. From this painting which is in Dr. Jackson's possession, the annexed drawings have been made. Fig. 1 shewing the general appearance of the limb and its proportion to the rest of the body, and fig. 2 representing more particularly the appearance of the foot.

I examined the limb after death, and found the disease entirely confined to the skin and adipose membrane: of the increase of the latter some idea may be formed, when I mention, that its thickness in front of the tibia, was full an inch and a half: although, as will be seen from the drawing, the anterior surface of the limb was flat, the aug-

* This painting is now in the Museum of the Royal College of Surgeons.

mentation having been greatest laterally, excepting in the foot only. The muscles were slender and pale, as might have been expected from long disuse ; but they lay in their natural relative situations, with respect to the bone and to each other, the disease not having at all extended into the interstices between them. There was no alteration in the state of the bones, or of the joints. Neither the femoral artery, nor its principal branches were at all enlarged, nor could I detect any change in the absorbent glands, either at the groin, or within the pelvis. I was not permitted to remove the whole limb, or I should have endeavoured to inject the absorbent vessels, but I doubt much whether any light would have been thrown upon the disease, had this even been done.

As the chief alteration of structure in the skin had taken place in the foot, I took this home, and injected its arteries with fine injection, in order to ascertain more perfectly the change it had undergone. The cuticle was very loosely attached, and was unusually brittle on the upper part of the foot, so as not to separate in large pieces, but to break away in furfuraceous scales or bits : on the under surface, however, except where a few tubercles had arisen, it had nearly its natural appearance, so also had the nails, except that they were much softened by the fluid which exuded from the surface, and had kept them constantly moist. Near the heel, the cutis itself had not undergone any mate-

rial alteration ; but over great part of the upper surface, the cutaneous papillæ were excessively enlarged, and elongated into pendulous inverted cones rounded at the end. The progress of this change may be distinctly traced in different parts of the preparation, with a glass of small magnifying powers, from the smallest eminence to the state in which they are represented in fig. 3. Each papilla is furnished with an artery of its own, which, where the injection has been most successful, terminates in villi upon its surface ; it was in that part of the foot where this change was most remarkable, that the patient complained of the greatest pain and soreness.

The villi at the extremities of the toes are at some points simply elongated, at others they are accompanied by papillæ resembling those already described, but longer and more pendulous. Some of these are represented by fig. 4.

In addition to these changes in the more vascular parts of the cutis, I must not omit to mention the great increase in the thickness of the corium, which was in some parts near a quarter of an inch, and on being cut into, presented the same grained appearance which is observable in a section of the hides of the larger quadrupeds.

Since this case occurred, I have had an opportunity of seeing one instance in this country, of

what I conceive to be the true Egyptian Elephantiasis; as it perfectly accorded, in every particular, with the description given by Mr. Bruce in his travels, book v. chap. 2. As this disease is very different from some other affections which have been called by that name, and as I have ascertained that it chiefly consists in a change which the cutaneous papillæ undergo, I trust an account of it will not be thought an improper addition to the history before recited; especially as travellers have only described the external appearance of the disease, and no one, that I yet know of, has examined the altered structure of the parts affected by it.

The subject of this complaint was also a female, whose legs began to swell shortly after the cessation of the menses, and gradually assumed the structure and appearance from which the disease has been so properly named. For the last two years of her life, she was confined to the chair in which she sat, being incapable of lying in bed. She was utterly unable to bear being lifted up into the erect posture, and could only be gently raised from her seat, with excessive pain, to pass the customary evacuations. Mortification at length came on and put a period to her misery, at the age of sixty-seven.

I examined the limbs after death, and took away a portion of the skin, to which the disease was entirely confined, but I could not remove either leg for injection. On examining the skin, the change

produced was chiefly in the papillæ of the cutis, each of which appeared elongated and enlarged into a roundish tubercle, over the surface of which, a thick, and almost horny cuticle grew, giving to the surface its dark colour and rough appearance. In the upper part of the leg, these tuberculated papillæ were smaller, and the cuticle thinner; but in the lower part they were large, and the tumefaction was so great, that the foot projected very little beyond the leg, more than the length of the toes. These larger tubercles were exquisitely painful in themselves, and were undoubtedly rendered more so by the horny cuticle dipping down into all their interstices and pressing upon them. Their appearance, after the cuticle was separated by maceration, in the various stages of their growth, is represented in figs. 5, 6, and 7. In the preparation from which the latter is taken, the cuticle has been left on in some parts, as at A, to shew its extension into their interstices.

From this account, it will appear that the true elephantiasis is a disease totally distinct from some cutaneous affections which have been called by that name. One of these is an excoriated state of the skin, which forms an imperfect cuticle, or rather a hard crust, not much unlike, in its appearance, to the true elephantiasis; but when this crust is separated, the cutis underneath is found smooth, and but little, if at all, changed in its structure.—This occurs mostly in the leg, but sometimes takes place in other parts.

Another disease which has been denominated elephantiasis, is that which now and then occurs in this country, but is endemial in some of the West India Islands, and is generally known by the name of the *Barbadoes leg*, as this also most commonly affects the lower extremity : it sometimes however attacks other parts : I have seen it in the arm, the penis, and several times in the scrotum. But in these cases, the *cuticle* is not much increased in thickness ; it has not the dry, horny, and lineated appearance observable in the skin of the elephant, and to which it had a very close resemblance in the case above described ; neither is there any appearance of enlargement in the papillæ of the skin, which retains nearly its natural colour, and has rather a shining surface. In the Barbadoes leg, moreover, the foot equally partakes of the disease, and the patient can generally walk about even in its advanced stages ; whereas in the true elephantiasis, the foot is only secondarily affected, by the swelling of the leg extending, so as to embody itself as it were with it, leaving the skin of whatever portion projects beyond the leg, uncontaminated. Moreover the horny state of the cuticle, and the exquisite sensibility of the de ceased papillæ, would render it impossible for the patient to walk, in the advanced stages of the true elephantiasis.

A disease affecting the face, which produces ulceration, and sometimes destroys the alæ nasi, has also been called elephantiasis, but very impro-

perly ; for in the elephantiasis no ulceration takes place, nor is there any similarity between the two diseases.

I will just add, that in a case of ulcerated leg, attended with a disease of the tibia, where the skin round the edges of the sore was remarkable for that appearance which has been termed *callous*, on injecting the limb, after it had been removed by amputation, I found the papillæ of this callous portion of skin enlarged into distinct, and slightly inflected cones, as represented at A, in fig. 8. On the cuticle being turned down at B, a separate sheath of corpus mucosum was found to have invested each papilla distinctly, together forming a most beautiful illustration of the papillary structure of the cutis, which is perfectly preserved in the preparation now in my collection.

T. CHEVALIER.

Note.—Since the first edition of this volume was published, I have seen another case of diseased legs, in which the papillæ of the cutis put on the same appearance as in the case of elephantiasis above described : but the discharge of a large ulcer on each leg prevented the cuticular covering from accumulating on them. The pain, however, was most exquisite, and the patient was unable to lie in bed night or day.

T. C.

Engraved by T. Stewart.

Fig. 2.

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Engraved by J. Sawert.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.