

VI. *Observations on certain horny Excrescences of the Human Body.* By Everard Home, Esq. F. R. S.

Read February 17, 1791.

THE history of diseases belongs not properly to the province of the naturalist or philosopher; it is intimately connected with the inquiries of the physician and anatomist; but when disease becomes a cause of the formation of parts similar to others existing in nature, but rendered uncommon by novelty of situation, or produced in animals to which they are not naturally appropriated, it may be considered as having instituted a monstrous variety, highly deserving of attention from the naturalist.

To describe such varieties is indeed more fully the office of natural history than of medicine; but the investigation of diseases which are found to subvert the ordinary laws of nature respecting the situation or production of parts in an animal body, undoubtedly belongs to the medical practitioner.

By these considerations I have been induced to lay before the Royal Society the following account of a disease which occurs sometimes in the human body, very remarkable in its effects, but very little understood as to its cause; namely, the production of an excrescence similar to a horn. So curious a phenomenon has naturally attracted the attention of the ignorant as well as the philosopher; and the individuals who have had the misfortune to be subject to this disease have been considered as monsters.

Horny excrescences arising from the human head have not only occurred in this country, but have been met with in fe-

veral other parts of Europe; and the horns themselves have been deposited as valuable curiosities in the first collections in Europe.

In giving the history of a disease so rare in its occurrence, and in its effects so remarkable as almost to exceed belief, it might be thought right to take some pains in bringing proofs to ascertain that such a disease does really exist: I consider the doing so as less necessary at present, there being two women now alive, and residing in England, who are affected by the complaint. I shall, however, in the course of this Paper, bring other evidence from the testimony of the most respectable authors who have considered this subject.

The two following cases contain a very accurate and distinct history of the progress of the disease through its different stages, and make any further detail of the symptoms intirely unnecessary.

Mrs. LONSDALE, a woman 56 years old, a native of Horn-castle in Lincolnshire, fourteen years ago, observed a moveable tumor on the left side of her head, about two inches above the upper arch of the left ear, which gradually increased in the course of four or five years to the size of a pullet's egg, when it burst, and for a week continued to discharge a thick, gritty fluid. In the center of the tumor, after the fluid was discharged, she perceived a small soft substance, of the size of a pea, and of a reddish colour on the top, which at that time she took for proud flesh. It gradually increased in length and thickness, and continued pliable for about three months, when it first began to put on a horny appearance. In two years and three months from its first formation, made desperate by the increased violence of the pain, she attempted to tear it from her head; and with much difficulty, and many efforts, at length broke it in the middle, and afterwards tore the root from her head, leaving a considerable depression which still remains in the

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The part where it grew. Its length altogether is about five inches, and its circumference at the two ends about one inch; but in the middle rather less. It is *curled* like a ram's horn contorted, and in colour much resembling isinglass.

From the lower edge of the depression another horn is now growing, of the same colour with the former, in length about three inches, and nearly the thickness of a small goose quill; it is less contorted, and lies close upon the head.

A third horn, situated about the upper part of the lambdoidal suture, is much curved, above an inch in length, and more in circumference at its root: its direction is backwards, with some elevation from the head. At this place two or three successive horns have been produced, which she has constantly torn away; but, as fresh ones have speedily followed, she leaves the present one unmolested in hopes of its dropping off.

Besides these horny excrescences, there are two tumors, each the size of a large cockle; one upon the upper part, the other about the middle of the left side of the head; both of them admit of considerable motion, and seem to contain fluids of unequal consistence; the upper one affording an obscure fluctuation, the other a very evident one.

The four horns were all preceded by the same kind of incysted tumours, and the fluid in all of them was gritty; the openings from which the matter issued were very small, the cysts collapsed and dried up, leaving the substance from which the horn proceeded distinguishable at the bottom. These cysts gave little pain till the horns began to shoot, and then became very distressing, and continued with short intervals till they were removed. This case is drawn up by the surgeon who attended the woman for many years, which gave him frequent

opportunities of seeing the disease in its different stages, and acquiring an accurate history of its symptoms.

Mrs. ALLEN, a middle-aged woman, resident in Leicestershire, had an incysted tumor upon her head, immediately under the scalp, very moveable, and evidently containing a fluid. It gave no pain unless pressed upon, and grew to the size of a small hen's egg. A few years ago it burst, and discharged a fluid; this diminished in quantity, and in a short time a horny excrescence, similar to those above mentioned, grew out from the orifice, which has continued to increase in size; and in the month of November 1790, the time I saw it, was about five inches long, and a little more than an inch in circumference at its base. It was a good deal contorted, and the surface very irregular, having a laminated appearance. It moved readily with the scalp, and seemed to give no pain upon motion; but, when much handled, the surrounding skin became inflamed. This woman came to London, and exhibited herself as a show for money; and it is highly probable, that so rare an occurrence would have sufficiently excited the public attention to have made it answer her expectations in point of emolument, had not the circumstance been made known to her neighbours in the country, who were much dissatisfied with the measure, and by their importunity obliged her husband to take her into the country.

That the cases which I have related may not be considered as peculiar instances from which no conclusions can be drawn, it may not be amiss to take notice of some of the most remarkable histories of this kind, mentioned by authors, and see how far they agree with those I have stated, in the general characters that are sufficiently obvious to strike a common observer; for the vague and indefinite terms in which authors express themselves

selves on this subject shew plainly, that they did not understand the nature of the disease, and their accounts of it are not very satisfactory to their readers.

In the *Ephemerides Academiæ Naturæ Curiosorum* there are two cases of horns growing from the human body. One of these instances was a German woman *, who had several swellings, or ganglions, upon different parts of her head, from one of which a horn grew. The other was a nobleman †, who had a small tumor, about the size of a nut, growing upon the parts covering the two last or lowermost vertebræ of the back. It continued for ten years, without undergoing any apparent change; but afterwards enlarged in size, and a horny excrescence grew out from it.

In the History of the Royal Society of Medicine ‡, there is an account of a woman, 97 years old, who had several tumors on her head, which had been 14 years in growing to the state they were in at that time: she had also a horn which had originated from a similar tumor. The horn was very moveable, being attached to the scalp, without any adhesion to the skull. It was sawn off, but grew again, and although the operation was repeated several times, the horn always returned.

BARTHOLINE, in his Epistles §, takes notice of a woman who had a tumor under the scalp, covering the temporal muscle. This gradually enlarged, and a horn grew from it, which had become twelve inches long in the year 1646, the time he saw it. He gives us a representation of it, which bears a very accurate resemblance to that which I have mentioned to have seen in November 1790. No tumor or swelling is

* Ephem. Acad. Nat. Cur. Dec. iii. An. V. Append. p. 148.

† Ibid. Dec. i. An. I. Observat. 30.

‡ Histoire de la Société Royale de Médecine, 1776, p. 316.

§ Epistol. THOM. BARTHOL.

expressed in the figure; but the horn is coming directly out from the surface of the skin.

In the Natural History of Cheshire *, a woman is mentioned to have lived in the year 1668, who had a tumor or wen upon her head for 32 years, which afterwards enlarged, and two horns grew out of it; she was then 72 years old.

There is a horny excrescence in the British Museum, which is eleven inches long, and two inches and a half in circumference at the base, or thickest part. The following account of this horn I have been favoured with by Dr. GRAY, taken from the records of the Museum. A woman, named FRENCH, who lived near Tenterden, had a tumor or wen upon her head, which increased to the size of a walnut; and in the 48th year of her age this horn began to grow, and in four years arrived at its present size †.

There are many similar histories of these horny excrescences in the authors I have quoted, and in several others; but those mentioned above are the most accurate and particular with respect to their growth, and in all of them we find the origin was from a tumor, as in the two cases I have related; and although the nature of the tumor is not particularly mentioned, there can be no doubt of its being of the incysted kind, since in its

* LEE's Natural History of Lancashire and Cheshire.

† The following extract is taken from the Minutes of the Royal Society, Feb. 14, 1704-5.

“ A Letter was read from Dr. CHARRIERE, at Barnstable, concerning a horn, seven inches long, cut off the second vertebra of the neck of a woman in that neighbourhood.

“ Dr. GREGORY said, that one of seven inches long, and of a dark brown colour, was cut off from a woman's temple at Edinburgh.

“ Dr. NORRIS said, that two horns had been cut off from a woman's head in Cheshire.

progress it exactly resembled them, remaining stationary for a long time, and then coming forwards to the skin; and the horn being much smaller than the tumor previously to the formation of the horn, is a proof that the tumor must have burst, and discharged its contents.

From the foregoing account it must appear evident, that these horny excrescences are not to be ranked among the appearances called *lufus naturæ*: nor are they altogether the product of disease, although undoubtedly the consequence of a local disease having previously existed; they are, more properly speaking, the result of certain operations in the part for its own restoration; but the actions of the animal œconomy being unable to bring them back to their original state, this species of excrescence is formed as a substitute for the natural cuticular covering.

To explain the manner in which these horns are formed, it will be necessary to consider the nature of incysted tumors a little more fully; and in doing so we shall find, that this particular species does not differ in its principle, nor materially in its effects, from many others which are not uncommonly met with in the human body, as well as in those of many other animals, which, as they are more frequent in their occurrence, are also much better understood.

Incysted tumors differ exceedingly among themselves, both in the nature of their contents, and in their progress towards the external surface of the body. Many of them have no reference to our present purpose; it is only the more indolent kind to which I mean now to advert: some of these, when examined, are not found to contain a fluid, but a small quantity of thick, curd-like matter, mixed with cuticle broken down into small parts, and upon exposing the internal surface of the cyst, it is found

found to have an uniform cuticular covering adhering to it, similar to that of the cutis on the surface of the body, from which it only differs in being thinner, and more delicate, bearing a greater resemblance to that which covers the lips. Others of this kind, instead of having cuticle for their contents, are filled with hair mixed with a curdled substance, or hair without any admixture whatever, and have a similar kind of hair growing upon their internal surface, which is likewise covered with a cuticle. These cuticular incysted tumors were, I believe, first accurately examined by Mr. HUNTER, to whom we are likewise indebted for an explanation of the mode in which the parts acquire this particular structure.

Mr. HUNTER considers the internal surface of the cyst to be so circumstanced respecting the body, as to lose the stimulus of being an internal part, and receive the same impression from its contents, either from their nature, or the length of application, as the surface of the skin does from its external situation. It therefore takes on actions suited to such stimuli, undergoes a change in its structure, and acquires a disposition similar to the cutis, and is consequently possessed of the power of producing cuticle and hair. What the mode of action is, by which this change is brought about, is not easily determined; but from the indolence of these complaints, it most probably requires a considerable length of time to produce it. That the lining of the cyst really does possess powers similar to cutis, is proved by the following circumstances: that it has a power of forming a succession of cuticles like the common skin; and what is thrown off in this way is found in the cavity of the cyst. It has a similar power respecting hair, and sometimes the cavity is filled with it, so great a quantity has been shed by the internal surface. Besides these circumstances,

the hair found in the cyst corresponds in appearance with that which grows upon the body of the animal; and when incysted tumors of this kind form in sheep, they contain wool. What is still more curious, when such cysts are laid open, the internal surface undergoes no change from exposure, the cut edges cicatrize, and the bottom of the bag remains ever after an external surface. Different specimens, illustrative of the above-mentioned circumstances, are preserved in Mr. HUNTER'S collection of diseases.

The cysts that produce horny excrescences (which are only another modification of cuticle) are very improperly considered as giving rise to horns; for if we examine the mode in which this substance grows, we shall find it the same with the human nails, coming directly out from the surface of the cutis. It differs from the nails in not being set upon the skin by a thin edge, but by a surface of some breadth, with a hollow in the middle, exactly in the same manner as the horn of the rhinoceros*; at least this is evidently the case in the specimen preserved in the British Museum, and in one which grew out from the tip of a sheep's ear; they are also solid, or nearly so, in their substance.

This mode of growth is very different from that of horns, which are all formed upon a core, either of bone or soft parts, by which means they have a cavity in them; a structure peculiar to this kind of cuticular substance.

Incysted tumors in different animals would appear, from these observations, to be confined in their production to the

* The horn of the Rhinoceros is a cuticular appendage to the skin, similar to nails and other cuticular excrescences, being in no respect allied to horns but in the external appearance.

cuticular substance proper to the animal in which they take place; for, although cuticle, hair, nail, hoof, and horn, are equally productions of animal substance, only differing in trivial circumstances from each other, we do not find in the human subject any instance of an incysted tumor containing a substance different from the cuticle, hair, and nails of the human body, to which last the horny excrescences, the subject of the present Paper, are certainly very closely allied, both in growth, structure, and external appearance; and when of some length, they are found to be so brittle as to break in two, upon being roughly handled, which could not happen either to hoof or horn. In the sheep they produce wool instead of hair; and in one instance in that animal, where they gave rise to an horny excrescence, it was less compact in its texture, and less brittle than similar appearances in the human subject; upon being divided longitudinally, the cut surface had more the appearance of hoof, and was more varied in its colour than nail.

Incysted tumors being capable of producing horns, upon the principle we have laid down, is contrary to the usual operations of nature; for horns are not a production from the cutis, and although not always formed upon a bony core, but frequently upon a soft pulp, that substance differs from common cutis in its appearance, and extends a considerable way into the horn: it is probable, that this pulp requires a particular process for its formation*.

* A sheep, about four years old, had a large horn, three feet long, growing upon its flank. It had no connection with bone, and appeared to be only attached to the external skin. It dropped off in consequence of its weight having produced ulceration in the soft parts to which it adhered. Upon examining it there was a fleshy substance, seven inches long, of a fibrous texture filling up its cavity upon which the horn had been formed.

I shall conclude this Paper by observing, that the cases of horns, as they are commonly termed, upon the human head, are no more than cuticular productions arising from a cyst, which in its nature is a variety of those tumors described by Mr. HUNTER under the general name of cuticular incysted tumors*.

These incysted tumors, when considered as varieties of the same disease, form a very complete and beautiful series of the different modes by which the powers of the animal œconomy produce a substitute for the common cuticle upon parts which have been so much affected by disease as to be unable to restore themselves to a natural state.

* The principle upon which the production of these excrecences depends being once explained, the modes of preventing their formation, and removing them when formed, will be readily understood, the destruction of the cyst being all that is required for that purpose. This may be done before the tumor opens externally, or even after the excrecence has begun to shoot out, and will be better effected by dissection than escharotics, since the success of the operation depends upon the whole of the bag being removed.

