

LECTURE XXIV.

ON SERO-CYSTIC TUMOURS OF THE BREAST.

THE disease of which I propose to treat on the present occasion, is an affection of the female breast. It is one of great interest in various ways, and among others in this, that in its more advanced stages it is liable to be confounded with carcinoma, although it is not really of a malignant nature. I should not have been able to trace its exact history if I had trusted altogether to my hospital experience. In private practice it is of frequent occurrence. Yet I have not met with any description of it in books corresponding to what I have myself observed of its actual progress. You will presently see how this is easily to be explained by the disease assuming a wholly new character as it proceeds, so that if you were to look at two cases of it, one in an early, and the other in a more advanced stage, without having witnessed the intermediate changes which have taken place, you would be scarcely able to recognize their identity. Let me not, however, be misunderstood as representing that no notice whatever has been taken of it by surgical writers. The account which Sir Astley Cooper has given of the hydatid breast has been taken principally from cases of this disease, and there are also some allusions to it in the Treatise on Diseases of the Breast, lately published by M. Velpeau.

The first perceptible indication of the disease is a globular tumour imbedded in the glandular structure of the breast, and to a certain extent movable underneath the skin. Sometimes there is only one such tumour; at other times there are two or three, or many more. The examination of the breast in the living person does not enable you to determine the exact number which exists, as it is only where they have attained a certain magnitude that they are perceptible through the skin. In most instances the disease is confined to one breast, though it is by no means very uncommon for both breasts to be similarly affected.

The globular form which the tumour invariably assumes in the first instance is a sufficient proof that it is formed of fluid collected in a cyst, and of course pressing equally in every direction. If you puncture the tumour with a grooved needle, the fluid may be evacuated so as completely to empty the cyst, and the perfect subsidence of it afterwards proves how little space the cyst itself occupies. The fluid is always serous. When the tumour is small it seems to be serum, unmixed with any thing else. In a more advanced stage of the disease, some colouring matter is generally blended with it, and it may be green, or brown, or so dark-coloured as to be almost black. The quantity of fluid of course varies. In dissection, I have found the cyst to be so small as to contain scarcely a single drop.

But it is sometimes capable of containing several ounces. In two cases in each of which I had the opportunity of examining a breast affected with this disease, I found small cysts, composed of a thin membrane, and containing serum, pervading the whole of the glandular structure, the intermediate parts presenting a perfectly healthy and natural appearance, and I could discover nothing more. I am, however, led to suspect that the cysts are originally formed by a dilatation of the lactiferous tubes. In one of the preparations now on the table you will perceive a bristle introduced into the orifice of one of these tubes opening on the nipple, which has passed into a cyst immediately below; and it is not uncommon to find that by pressure on the tumour, the fluid may be made to escape by the nipple, even so as to expel the whole of it.

To complete this history of the disease, as it first shows itself, I may add that the general health is unaffected, and that the patient complains of no pain, unless it be that, in some instances, there are those disagreeable nervous sensations which are apt to arise whenever the attention is anxiously directed to any one part of the body. I have never known the disease to occur previously to the age of puberty, nor after the middle period of life: and, if I am not much mistaken, it is more common in single than in married women.

There are not a few cases in which no morbid changes take place beyond that which I have already described; the cysts remaining unaltered, or only slowly increasing in size during the remainder of the patient's life. But in other cases the tumours lose their globular form, and a solid substance is deposited in the breast, connecting different cysts with each other in one large mass of disease. This process may be going on for many successive years without inducing pain or much inconvenience, except what belongs to the bulk of the tumour. But the period at last arrives when other changes take place, the disease assuming a more formidable and dangerous character. The skin, in some one part, more tense and thin than elsewhere, becomes inflamed and ulcerates; and an intractable and bleeding ulcer is the consequence. Then one of the cysts, more distended than the rest, gives way, discharging its serous contents. Perhaps the opening heals, then again gives way; and this may recur several times, until at last a fungous growth protrudes through the opening. And here the question arises, what is the exact nature of these changes, which, by a slow gradual operation, at last convert a disease so small and simple in its origin, into one so extensive and complicated? This I shall next endeavour to explain; and a series of preparations on the table, with the histories of the cases belonging to them, will enable me to do so.

The first of these is a membranous cyst, which I removed from the breast of a private patient. It is of the size of a large walnut; and you will observe that about one-fourth part of its cavity is occupied by an irregularly shaped excrescence attached to one portion of its internal surface.

Several years ago Mr. Green and myself were present, when Mr. Freeman, of Spring Gardens, removed the breast of a female with a

similar tumour imbedded in it. The tumour was of about the same size as that which I have just shown you; and in my notes of the case I find it stated, that "the cyst contained serum, but that about one-third part of its cavity was occupied by an excrescence which came from one part of its inner surface. The excrescence had the appearance of fibrin which had become vascular."

The history of the patient whose case has furnished us with the next preparation, and the accompanying drawing, is highly interesting, and illustrates many circumstances connected with this disease.

This lady consulted me in the month of October, 1837, respecting a tumour of the breast, which might be compared as to size to a large nutmeg. It was of a globular shape, and evidently contained fluid. I punctured it with a grooved needle, and a yellow serum escaped. There were no other indications of disease. Afterwards I made a free opening into the cyst with a lancet, and the whole of the fluid having been evacuated, I introduced a piece of lint, with a view to produce inflammation and the formation of granulations on its inner surface, which might obliterate its cavity. An abundant suppuration and a good deal of inconvenience followed this trifling operation. At the end of about two months, although the abscess was not properly closed, the patient believing herself to be nearly well, left London of her own accord. I heard nothing of her from this time until, after the lapse of fifteen months, she again placed herself under my care. In the situation of the cyst which I had laid open there was now a considerable solid tumour, a portion of which, about half the size of an orange, projected through an opening in the skin, forming an irregularly-shaped fungus. There seemed to be no other remedy than that of the removal of the breast by an operation, to which the patient willingly consented; and from which she recovered favourably.

On examining the tumour in its recent state some remains of the original membranous cyst, containing a small quantity of serum, were found at its basis. A large quantity of solid substance projected as an excrescence from the inner surface of the cyst, assuming a peculiar plicated or fimbriated appearance, and a portion of this excrescence protruding through the skin, formed the external fungus. You will see these appearances distinctly visible in the preparation, although not so plainly as before the parts were immersed in alcohol, and they are well represented in this drawing, which is made with Mr. Perry's usual accuracy. The structure of the morbid growth seems to be of the simplest kind. I can compare it to nothing better than fibrin imperfectly organized. Its existence does not seem to be limited to the inside of the cyst, a considerable mass being on the outside, in immediate contact with the gland of the breast. Previously to the operation the remaining part of the breast appeared to be in a healthy condition; but on dissection afterwards I found imbedded in it a great number of membranous cysts, of various sizes, from that of a pea to that of a horse-bean. These cysts contained a transparent yellow serum, and were evidently of the same nature

with the larger cyst which I had formerly punctured, and in which the fungus had originated afterwards.

The preparation which I now show you leads me to the history of a patient, who is still under the care of Mr. Keate, in this Hospital. Fifteen months ago, being then an out-patient, she had a tumour of the left breast, above the nipple, of the size of a walnut. It was globular and movable. Mr. Cutler punctured it with a grooved needle, and ascertained that it contained serum. Soon afterwards it was found that a fluid, similar to that which had escaped by the puncture, was discharged by the nipple. From this time the tumour gradually increased in size. Six weeks ago Mr. Keate repeated the puncture with a needle, giving exit to a large quantity of yellow serum. The tumour, in consequence, was much reduced in size, but it soon enlarged again, so as to exceed its former dimensions. On the 21st of last December, Mr. Keate made an incision into it, and the cyst was now so capacious that not less than half a pint of serum was evacuated by the wound. The serum was now tinged with blood, and a good deal of hemorrhage followed the operation. In the course of a few days a large dark-coloured fungus was seen projecting through the wound. Under these circumstances, on the second of the present month, Mr. Keate amputated the breast, and you may here see the morbid appearances which it presents.

The tumour consists of a large membranous cyst, which might have been capable of containing twelve ounces of fluid, if the greater part of its cavity had not been occupied by a great number of excrescences attached to its inner surface. These excrescences vary in size, the smallest being not bigger than a pea, while one of them is of the size of a small orange. They are covered by a thin membrane, which appears to be continuous with, and a reflection of the inner layer of the cyst. When cut into, these excrescences present the appearance of a considerable variety of structure. Some of them may be compared to recently coagulated albumen not yet organized: others, to imperfectly organized fibrin: some of them have an apparent resemblance to fatty tumours, although I do not find that they actually contain any oily matter, and one of them might, on the first view of it, be almost mistaken for medullary disease.

The tumour which is displayed in the next preparation illustrates a still more advanced stage of the disease. I removed it from the breast of a private patient in the month of November, 1836. It had existed for many years, gradually, but slowly, increasing in size. You perceive that at the time of its removal the tumour was not larger than a small orange, and that it was of an irregular shape. Near the base of the nipple is a membranous cyst, which contained two or three drachms of very dark-coloured serum. Some smaller cysts, which also contained serum, are seen in the neighbourhood, and a bristle introduced at one of the ducts of the nipple has entered one of the cysts by a smaller circular aperture. The seat of the tumour, on a superficial view of it, appears to be one uniform mass of solid substance: but on a more close inspection you find it to consist of a congeries of membranous cysts, the cavities of which are completely filled with

fibrinous matter. In many of the cysts, on examination with a probe, I found this fibrinous matter to have an attachment to one part of the inner surface lying in contact with the lining membrane elsewhere, but having no actual adhesion to it.

We can scarcely doubt that if in this case the operation had been deferred until a later period, the growths of fibrinous matter, by which the cysts were occupied, would have contracted universal adhesions to the membrane with which they lay in contact, and that the whole, with the exception of those cysts which still contained serum, would have been identified in one solid mass of substance, in which the original cellular or cystic structure would have entirely disappeared. Of this last change, the preparation which I now show you, seems to furnish an example. The patient from whom this specimen was taken was under my care in the year 1818. I have no notes of the early history of the case; but the disease had probably been of long duration, as, at the time of my being consulted, the breast had attained an enormous size, being not less than seven pounds in weight. She was a middle-aged person, otherwise in good health, and the skin and the axillary glands were free from disease. Under these circumstances the diseased breast was amputated. The wound healed favourably, and I heard of the patient being alive and well several years afterwards. If you examine the cut surface of the tumour, or rather of that portion of it which is displayed in the preparation, you will see that the greater part of it is one uniform solid mass, of which it is difficult to describe the structure in words, further than by saying, that in some parts it has an indistinct laminated appearance. There are, however, in one part of it, several membranous cysts of various dimensions, which, when first cut into, were found containing serum. One of those is distinguished from the rest by its greater size, being capable of containing several ounces of fluid, but being also occupied by a large excrescence attached to one part of its inner surface, and projecting into its cavity. This excrescence is of an irregular shape, very similar in appearance to some of those which you have seen in the other preparations. In its recent state it seemed to consist of distinct masses of recently coagulated albumen, semi-pellucid, some of a light yellow, others approaching to a purple colour, and altogether bearing no small resemblance to a bunch of white and purple grapes. These peculiar appearances of course, have been destroyed by the immersion in alcohol.

Having explained to you these facts in detail, with a view to impress the subject more completely on your minds, I shall endeavour to trace, in a few words, the pathological history which they seem to establish, and which, not only as a matter of science, but in a practical point of view, it is so important for you to understand. It appears, then, to be as follows:—

First: a greater or less number of membranous cysts are generated in the breast, containing serum. The latter is at first of a light yellow colour, and transparent, but afterwards becomes of a darker colour, and opaque. There is reason to believe that these cysts are formed by a dilatation of portions of some of the lactiferous tubes.

Secondly: morbid growths or excrescences are generated from the inner surface of one or more of these cysts, projecting into their cavities. These excrescences seem to consist of albumen or fibrin, which, after some time, (if not immediately,) becomes organized. They are covered by a thin delicate membrane, which seems to be reflected over them from the inner surface of the cyst; but whether they are originally formed between two layers of the membrane of the cyst, or whether they are at first mere deposits of fibrin or albumen on the inner surface of the cyst, a thin membrane being formed on their surface afterwards, remains to be determined by future observations.

Thirdly: there is some reason for believing that a similar growth of fibrinous substance may take place from the external surface of the cysts connecting different cysts with each other; but this point may perhaps require to be illustrated by further investigations.

Fourthly: under certain circumstances the cysts become completely filled up by the morbid growths, so that their cavities are obliterated, the tumour being thus converted into a solid mass, in which, however, the remains of the cysts are perceptible; and this is the prelude to a still further change, in which the greater part of the cysts have wholly disappeared, a solid mass of an indistinctly laminated texture occupying their place.

Fifthly: if one of the membranous cysts be artificially laid open, or if it burst from over distension with serum, the fibrinous excrescence from its inner surface being no longer restrained by the pressure of the skin, increases in size, and protrudes externally in the form of a fungus, giving to the tumour a new and more formidable character.

In this last stage of the disease, it is evident that spreading ulceration, sloughing, and hemorrhage, the usual results of an ulcer occurring in a diseased structure, must ensue, and that no remedy is likely to be of any service to the patient, except the removal of the affected parts by a surgical operation.

And this leads us to the concluding and most important part of these inquiries. In considering the treatment of these cases, it is convenient to distinguish those in which the disease is still in its earliest stage, presenting itself in the form of a membranous cyst, or cysts, containing serum, from those in which the growth of a solid fibrinous substance has become superadded to this simple original structure.

In the first order of cases we may venture to evacuate the fluid contents of the cyst by penetrating it with a grooved needle. No inconvenience is ever the result of this trifling operation; and it is often useful by assisting us in our diagnosis, and also by enabling us to determine whether any growth of solid matter, in connection with the cyst, has yet taken place. But it is not productive of any permanent benefit, as the fluid is always regenerated in the course of two or three days. I have no experience which would lead me to recommend any further or more considerable operation than this. It is needless to remove what appears to be a solitary cyst, as it is always highly probable that there are other cysts in other parts of the breast co-existent with it, which are not yet sufficiently developed to be

perceptible through the skin; or otherwise, that such cysts will be formed afterwards if they do not exist already. As to the removal of the entire breast, it is, under these circumstances, an unjustifiable proceeding, unless it be in a few cases in which the cyst or cysts have attained so large a size as to be inconvenient from their bulk. The disease, in its early stage causes no suffering, and may remain for years, or for the whole of the patient's life, without advancing farther, and under these circumstances, no harm can possibly arise from delay. Besides: if I am not greatly mistaken, there is a simple and safe mode of treatment which may often be employed with great advantage, and which is not open to those objections to which any severe operation is always liable.

Some years ago, a lady consulted me concerning a small tumour of the breast, near the nipple, and apparently containing fluid. Not at that time knowing anything better, I recommended that it should be removed by the knife. The day was fixed for the operation, but, in the meantime, some domestic circumstance occurred which made it necessary that it should be postponed. Under these circumstances I proposed to the patient that she should make the experiment of applying a stimulating embrocation to the surface of the skin. This accordingly was done, and the result was, that the tumour disappeared. Some time afterwards, another lady consulted me, having a globular tumour of one breast, larger than a pigeon's egg. I punctured it with a grooved needle, and a considerable quantity of serum was drawn off. In a few days, the fluid being re-produced, the tumour, which had wholly disappeared, was as large as ever. I now applied the same treatment as in the former case; and in the course of some weeks the whole of the fluid had become absorbed, and nothing was perceptible, except a slight thickening, apparently formed by the collapsed membrane of the cyst. The thickening disappeared gradually, and when I last saw the patient, three or four years after the time which I have mentioned, there had been no recurrence of the disease. Since these cases occurred, I have had recourse to the same method of treatment in many instances. In some of them the result has been, that the tumour or tumours have entirely disappeared; in others, that without disappearing altogether, they have become very much reduced in size; and it is only in a few instances in which the treatment was not very rigidly pursued, that it has been productive of no manifest advantage.

The application which I have generally made use of on these occasions is the following:—R.—*Spiritus camphorati*, *Spiritus tenuioris*, aa ʒiiss ; *Liquoris plumbi diacetatis*, ʒj . *Fiat embrocatio*.

I have directed the patient to soak a piece of flannel in this embrocation, and to apply it so as to cover that part of the breast in which the tumour is situated, renewing the application six or eight times in the day and night until the skin becomes inflamed; then to omit the application for two or three days, but to resume the use of it as soon as the inflammation has subsided. The period of time during which it is necessary to pursue this method of treatment varies in different cases. In some, all that can be desired is accomplished in the course

of three or four weeks; in others, it must be continued, with occasional intermissions for some months. Other stimulating applications may be occasionally substituted for that which I have just mentioned. Several blisters may be applied in succession; each of them being kept open for a few days with the savine cerate; or a solution of ʒj of iodine in ʒj of alcohol may be applied to the skin once or twice daily, by means of a large camel's-hair brush. On the whole, however, I am led to believe, that the embrocation is more efficient than anything else.

But these remedies are of no avail when the growth of solid substance is begun. In this more advanced period of the disease, no good is to be expected except from the removal of the entire breast; and such an operation may be had recourse to with every prospect of success.

The disease seems to be entirely local. It belongs to the breast, and to nothing else. It does not contaminate either the skin or the lymphatic glands; it is not complicated with any corresponding disease of the viscera; and all the experience which I have had justifies the conclusion, that if care be taken that no portion of the breast is allowed to remain, there is no danger of its recurrence.

A careful observer will find little difficulty in distinguishing cases of this disease from those of the other diseases to which the breast is subject. It is, however, desirable, with a view to a more ready and accurate diagnosis, that we should consider what are the diseases with which it is most liable to be confounded. The principal of these are as follows:—

First: a thin membranous cyst, containing a transparent watery fluid, without coagulable matter, is occasionally found in the breast, which may be compared to the membranous cysts, containing pure water, which are sometimes met with in connection with the liver; and of which I have published some cases in one of the medical journals;* and to the encysted hydrocele of the spermatic cord or testicle. This disease is probably rare, as only two examples of it have fallen under my observation. In one of them the cyst was extracted by an operation; in the other the nature of the fluid having been ascertained by means of a puncture with a grooved needle, the tumour afterwards disappeared under the use of a stimulating embrocation.

Secondly: a cavity is sometimes formed in the breast, containing one or more genuine hydatids. Here there is a single fluctuating tumour, which gradually increases to a large size. If it be freely opened, the hydatids escape, and the cavity in which they were lodged becomes an abscess, which slowly closes and heals.

Thirdly: in a more advanced stage of the disease, it is not unfrequently mistakenaken for carcinoma; and I have no doubt that a large proportion of the cases in which it has been supposed that an operation has effected a permanent cure of the last-mentioned disease, have been in reality of this description.

* See London Medical Gazette, vol. i. p. 344, and vol. xv. p. 25.

I have hitherto confined myself to the description of the origin, progress, and treatment of this disease of the breast, without venturing to give it a name.

It is, however, necessary that we should have the means of distinguishing it in conversation and in writing; and I would suggest "the sero-cystic tumour of the breast" as being an appropriate appellation—preferable, at all events, to a mere arbitrary term; inasmuch as it expresses with sufficient precision the character which the tumour possesses in its origin.

LECTURE XXV.

SCIRRHUS OF THE BREAST.

If a scirrhous tumour of the female breast be left to take its course, it gradually increases in extent; it contaminates the neighbouring textures; it finally ulcerates, and in the great majority of cases, the patient's life is terminated in three or four years from the commencement of the disease. Not only is life terminated thus early, but death is preceded by a very painful state of the ulcer. The ulcer is disposed to bleed and to slough, and the patient's life is rendered miserable. There is not a much worse way of leaving the world than that of being destroyed by an ulcerated scirrhous of the breast.

Looking at these facts alone, you would say there is no doubt that the proper thing to be done is to remove the disease by an operation. But there is another order of facts which must be taken into account. In the large proportion of cases in which the operation is performed, the patient is still not alive two or three years afterwards; and, in a great number of cases, instead of the operation stopping the disease, it actually seems to hasten its progress. But, besides this, the operation in itself is not in every case free from danger.

Now these different orders of facts have led different surgeons, accordingly as they have looked at one or the other, to arrive at opposite conclusions as to the propriety of an operation. I have known some very excellent surgeons, among whom were the late Mr. Cline, and Sir Everard Home, both men of great experience, who would scarcely ever consent to the operation for the removal of a scirrhous tumour of the breast, under any circumstances whatever. But then, I have known other surgeons, also experienced men, who were in favour of the operation, perhaps, in the majority of cases. And not only has there been this variety of opinion between different individuals, but I have found the opinion of the same individual to differ at different periods of his life. A very distinguished surgeon once said to me that he thought he would never perform this operation again, and yet that very surgeon, three or four years afterwards, strongly recommended the operation in a case in which I thought it would

fail. This discordance of opinion only shows the difficulty with which the subject is beset, and if this difficulty has stood in the way of men of great experience in their profession, it may well stand in your way, who are only beginning your career. It appears to me, therefore, that it may be of advantage to you if I present some observations on the subject, and endeavour, as far as I can, to clear away the difficulty respecting the expediency and in expediency of the operation.

This, then, constitutes the subject of the present lecture:—Under what circumstances is the operation for the removal of a scirrhous tumour of the breast proper, and under what circumstances is it improper?

It should, however, be observed, in the first instance, that while much depends upon the nature of the case, yet something depends upon yourselves as to the mode of performing the operation. If there be a scirrhous tumour imbedded in the gland of the breast, and you remove the tumour, together with the part of the breast in which it is situated, leaving the remainder of the breast, according to my experience the disease is certain to return; and this corresponds to a rule which I think applies to all cases of malignant disease—that is, that you have no security against the return of the disease unless you remove the whole of the organ in which it is seated. For instance, if there be fungus hæmatodes of the bone of the leg, the patient may have some chance if you amputate the thigh above the knee, but none if you cut through the tibia below the knee. If there be malignant disease of the femur, you have very little chance at all, unless you think it expedient to take out the thigh-bone at the hip-joint. I say, therefore, in cases of scirrhous tumour of the breast, if you perform the operation at all, where the tumour is imbedded in the breast, you must remove the whole of the organ. You may imagine that this is a thing very easy to be done, but you will not find it so in reality, for in amputating the breast, in a thin person, you will be very apt, if you are not extremely careful, to leave a small slice of the gland of the breast adhering to the skin, and I have no doubt that this small portion may, in some cases, form the nidus of future disease. The colour of the gland of the breast varies little from that of the surrounding adeps, the hemorrhage causes confusion, and you must be careful in the dissection to keep the knife near the skin, not near the breast. But, in addition to this, in every case, when you have taken out the tumour, you should examine the surface, and see whether every part you have removed is covered by healthy adeps. If it be not, look on the middle of the flap of the skin, and see whether any small portion of the breast has been allowed to remain there.

So far, then, the success of the operation may depend mainly on what you do; but now let us see what are the circumstances that are independent of any thing that you do, and which may induce you to think that there is no chance of the operation leading to an ultimate cure; and what are the circumstances that should lead you to hope that a permanent cure may be effected.

Scirrhous tumours of the breast may be divided into two classes;