ON THE
VARIETIES OF DISEASES
COMPREHENDED
UNDER THE NAME OF
CARCINOMA MAMMÆ.

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PART I.

THE diseases I am about to describe, do not make a silent and gradual progress, leaving the patients to deceive themselves with hope; the danger is impending and immediate, the appearance is striking and monstrous, and fills the mind with horror not to be concealed; the patient sinks gradually, she dies daily, and is conscious that she is dying.

My duty requiring me to visit regularly a numerous class of female patients suffering from cancer, I ought not to reserve my testimony to their conduct—how seldom the pressure of severe pain and the sure approach of death influence them to any expression of impatience or complaint; they

are, on the contrary, calm and placid, if not cheerful, giving an example of unostentatious resignation, and the blessed influence of religion—which witnessing, the mind naturally reverts to the boasted instances of philosophy in the other sex, which are as nothing in comparison.

The members of this Society will allow that I have other objects more agreeable to pursue, and more creditable if pursued successfully: they will therefore believe, that in bringing this painful subject before them, I am acting from a principle of duty.

Many hopeless cases of local disease, under the name of cancer, are sent into our wards; some of these are tractable, and can be cured; some of them are incurable, by our present means. We ought never to lose the hope of finding a remedy for these; but we have other objects not less important, and within our power of accomplishing. To alleviate pain, to prolong life, to make the disease bearable to the patient, and less a source of horror to friends, is within our power. To distinguish diseases of a different nature, to know when to extirpate with the knife, when to avoid the performance of severe but useless operations, are objects sufficiently important. How often is a simple tumor mistaken for a cancer; how often is a disease of mere irritation from neighbouring or remote sympathy, or even from motion of the part, mis-

taken for a formidable cancer ! There are cases where we have it in our power to relieve the patient from an agony of mind worse than bodily suffering, and by distinguishing diseases to preserve them from being the dupes of quacks who ruin them. By much the larger portion of patients received into the cancer ward of the Middlesex Hospital, have spent their last penny, and, what is worse, they have lost that precious time in which they might have been cured, in attendance on a set of the most unfeeling wretches that ever disgraced a country. Indeed, the subject would be sufficiently important if we had no other object than to make those distinctions in the diseases called cancers, and to note those occasional variations in their progress, which afford to that class of persons the means of deceiving.

In treating of the varieties of disease which are called cancers of the breast, I shall first present a history of true carcinoma ; I shall then give the character of other diseases, which differ in some circumstances, but which are of the same formidable nature ; I shall then return to the consideration of the character and changes of the more common form of the disease, for the purpose of giving instances of the mistakes we are liable to in treating it, the changes to which it is subject, and through which deceptions are practised on public credulity.

I. *Carcinoma mammæ*. We ought first to notice the effect of age on the whole class of carcinomatous tumors; for the same disease, recognisable by obvious signs, will run its course rapidly, and with every symptom aggravated, in a woman of forty-five, while it will remain stationary for years in a woman of sixty or seventy.

In an old woman, the carcinoma will present one or two small tumors exceedingly hard, and attached to, or incorporated with, the wasted mamma, and with the pectoral muscle. The skin over these tumors will become attached, the surface will become discoloured and livid, and will exhibit a great degree of venous vascularity.

These hard lumps will remain very long stationary, having a rosy surface slightly ulcerated. The ulceration will indeed sometimes close, and the tumor remain inactive, while a constitutional disease is making slow progress. The patient, excessively extenuated, will at last sink, from the continuance of a peculiar hectic, attended with pains in the lower part of the spine, hips, and shoulders.

II. The true carcinoma belongs to that term of life, when the uterine functions cease. It occurs in this manner:—The menstruation becomes irregular, both in respect to time and quantity.

There are long intervals, after which the discharge is profuse, with unusual disturbance of the general system. The mamma, in particular, sympathises with the condition of the uterus; pains strike through it, and it swells; the general fullness and tension subsiding, a more partial hardness is left, a "hard lump" is felt; it has irregular margins which mix with the substance of the breast. The hardness extends, until there is an unusual firmness over the whole gland; at the same time it becomes tuberculated, or knobby and irregular. The veins on the surface of the mamma, and in the surrounding skin, become more distinct and larger, and of a deeper blue colour. In the mean time, the patient's strength declines, and she visibly wastes in flesh.

A very important character is now exhibited in the change produced on the nipple. It is not only drawn in and incapable of erection, but it is retracted in comparison with the irregular convexity of the mamma. In a later stage, not merely the nipple but the skin is puckered and tucked in, and as if it were drawn into the vortex of disease. They now adhere firmly to the mass below, and sometimes there is bleeding from the nipple, which taken with the other circumstances is an unfavourable symptom. The glands of the axilla are early affected by the disease when the nipple bleeds.

III. A true carcinoma may begin very differently, and exhibit a different exterior character. A small hard tumor is felt deep seated in the mamma. It is difficult to distinguish whether or not it is a part of the proper gland. Its progress is generally this: it becomes painful, it draws nearer to the surface, it becomes attached to the mamma and to the skin, and is gradually incorporated with them. The skin becomes discoloured, the surface becomes moist, and the patient is alarmed lest a sore should break out.

It does ulcerate, and begins to discharge. The bottom of the sore is foul and sloughy, the smell is offensive, and the constitution sympathises with the state of the sore.

The whole gland is now hard, and adhering to the pectoral muscle. The edges of the sore are particularly hard, of a dark red, and have a glazed appearance. The edges have not risen with everted and curling margins: they are rather depressed under the general convexity of the tumor, and, as it were, condensed into a smaller volume. This will certainly be the appearance presented in a fat woman.

The ulcer is deep and foul; by pressing the tumor laterally it is opened, and the chasm is deep, like a wound with a knife, having solid,

abrupt, and sharp edges. In proportion to the depth of the ulcer, the surrounding hardness extends; and when the whole breast is taken betwixt the ends of the fingers, it feels of a stony hardness.

IV. The disease, although commencing in the mamma, will sometimes propagate itself, not so much by engaging the textures of the mammary gland, as by building up its peculiar structure in the cutaneous glandular texture. Tubercles will be felt in the skin around the nipple, and extending to the skin of the breast, neck, and shoulders. These tubercles become painful and are soon attached to the skin. They first assume a high red colour, then a yellowish transparency in the centre. This appearance might persuade us that they were about to break and suppurate, but they do not, nor do they change until they open into a corroding and wasting ulceration.

V. It is a form of the same disease when the breast presents a tumor elevated, tuberculated, and remarkably firm, having no elasticity, but being, on the contrary, fixed to the side and rocky, so as to present one consolidated mass. The surface is granular, and of a deep or rather dark red colour, with a bluish cast, and somewhat like the colour of a peach. This tumor ulcerates and sloughs, and bleeds profusely: yet the bleeding may be considered as an accidental circumstance, in as far

as it is a mere consequence of the sloughing. The disease is propagated by tubercles under the skin, towards the sternum and clavicles. Effusion into the chest is an early accompaniment of this form of disease.

It is necessary, before we proceed further, to consider the volume and form of the carcinomatous tumor.

One of the most learned surgeons of the present day says, that *tumor* is not an essential character of carcinoma. It is certainly true that there is not always an increase of the dimensions of the whole breast; on the contrary, the true carcinoma is often accompanied with a contraction and diminution of the general bulk. But what is true of the breast or mamma is not true of the *tumor*. For the proper structure of the gland either shrinks or is compressed; and sometimes the surrounding fat is diminished by absorption, so that the whole mass is less than the natural breast, or than what the breast was before the commencement of the disease. But still the diseased part is properly a tumor: there we undoubtedly see an increased mass, a preternatural growth, or new matter, corresponding to the old definition, "*morbosum augmentum*." But further, and in respect to the adipose membrane, the fat is not always diminished in carcinoma mammæ, but sometimes quite the contrary. And this difference in it will

sometimes produce a variety in the external character, when there is none in the disease actually, or in the internal structure. Sometimes from the diminution of fat, the irregular tuberculated structure of this disease will be apparent to the eye and to the touch; while in another patient the breast will be large, full, and smooth, only marked more than naturally with large blue veins, and having an ulcer like a hole dug in the substance of the breast.

VI. *Impostumated Cancer.* Here let me notice a deceptive appearance in the progress of cancer. While the mamma is not yet ulcerated, it will swell and soften and point, and finally burst, with all the appearance of a scrofulous abscess. So that you are sustained with a hope, that the disease is of a less malignant character than you at first imagined. But presently there is disclosed a large chasm sloughy and foul. The parts around this chasm become harder and tuberculated, and the edges are everted. This is the true impostumated cancer.

VII. It is important to observe the variations in the aspect of cancer. The local disease makes its progress in two ways: 1. by *ulceration*, that is by absorption; 2. by *mortification*, and sloughing of successive portions. And accordingly the aspect of the sore varies in a very remarkable manner. To-day, the symptoms shall be mild, the matter bland, and the breast altogether in a tranquil state:

to-morrow, it will be full of pain and tumid, the discharge thin and corrosive, certainly acrid, the edges of the sore sharp and of a fiery redness, and the bottom full of sloughs.

But this will not continue ; the excited action will again subside ; once more the ulcer appears clean, and shows a disposition to heal, and even to cicatrize. Sometimes a cancer will close, and be quite healed ; but the skin, though closed, is not sound, it is too vascular and of a dark lake colour, and the parts beneath are hard and irregular.

VIII. *Character of the Ulcer.* When the carcinoma is about to break out into open cancerous sore, the skin becomes attached to the tumor, and thin, and of a livid colour. Small capillary vessels cover the tubercles ; the sword pains increase in severity, and an imperfect suppuration takes place, which opens in a deep ulcer ; a foul cineritious-coloured secretion lines the cavity of the ulcer, and a thin fluid is discharged from it. The edges of the ulcer are of a fiery redness ; the skin is hard, tuberculated, and everted, while the immediate margin is turned in towards the ulcer.

Although the substance wastes and the ulcer be enlarged interiorly, there continues to be a chain of tubercles closely incorporated with the skin. These tubercles are of a bright lake colour, with a shade of livid or leaden colour.

IX. Often the sore spreads superficially, and there is a large surface ulcerated and covered with a film of coagulable lymph, while around, there is a regular elevated edge, as if an attempt had been made to stop the ravages of the ulcer by this circumvallation. This margin is composed of tubercles rising above the margin of the skin, very vascular, livid, hard, and exquisitely painful.

X. *The General Condition of the Patient.* In the mean time the general condition of the patient is pitiable. Suffering much bodily, and every thing most frightful present to the imagination, a continual hectic preys upon her, which is shown in increasing emaciation. The countenance is pale and anxious, with a slight leaden hue; the features have become pinched, the lips and nostrils slightly livid; the pulse is frequent; the pains are severe. In the hard tumors the pain is stinging or sharp, in the exposed surface it is burning and sore. Pains, like those of rheumatism, extend over the body, especially to the back and the lower part of the spine; the hips and shoulders are subject to those pains. Successively the glands of the axilla and those above the clavicle become diseased. Severe pains shoot down the arm of the affected side. It swells to an alarming degree, and lies immoveable.

At length there is nausea and weakness of digestion. A tickling cough distresses her. Severe

stitches strike through the side ; the pulse becomes rapid and faltering ; the surface cadaverous ; the breathing anxious ; and so she sinks.

XI. *Carcinoma Mammæ Hydatides*. In what I am about to describe, as the hydatid tumor of the mamma, I am not influenced by what Dr. Adams published under the name *Hydatis Carcinomatosa*. He was undoubtedly much deceived. He believed that the pelicles of fat which we may see within the embrace of the diverging filaments of the carcinomatous tumor, were living hydatid animals, and the source of all the mischief. What I have now to describe is a very different tumor to outward appearance, and of a different internal structure compared with the common carcinoma.

When the mamma affected with this disease assumes its full volume, it presents a very remarkable appearance. The tumor stands prominent ; its base, that is its connection with the side, is not the place of its greater diameter. It measures less round the base than a little removed from the side. It is not hemispherical, but of a squared or angular form. The nipple is not drawn in, but stands prominent, and with a natural appearance. The veins upon the surface are of a great size, and yet perhaps only bear a relative magnitude to the tumor. The tumor to a very late stage is loose from the pectoral muscle. It is irregular, and not equally

soft or elastic ; the elasticity, at certain points, is so considerable as to distinguish it from the common carcinoma.

In operating on such a tumor, it is much easier to turn it off from its connections than to dissect out a common carcinoma. It is, however, a bloody operation, for many branches of arteries require to be tied.

This tumor when cut into, does not exhibit a concentrated mass, but is distinguishable into parts or clusters of lesser tumors. When these subdivisions are cut into, they present the most common carcinomatous appearance, being firm in texture, and having the ligamentous bands both forming areolæ and diverging lines, and these are distinguishable by their whiteness from the matter they embrace. In the interstices of the tubercles, some larger bags or cells are found, of a yellowish or amber colour. These cells are of various sizes, and the larger ones contain a dark fluid like blood, or bile.

It is the developement and remarkable increase of one or two of these cells, which give a prominent and square character to this species of carcinomatous mamma. This disease, like the common carcinoma, makes its attack at the climacteric period. The tumor is remarkable in the slowness of its growth, and its longer endurance or continu-

ance ; nor is it attended with the same severity of pain as the carcinoma we have described. The glands of the axilla are free from disease at a later period than in the tumors described, and the mass may be extirpated with more sanguine hope of permanent advantage.

XII. *Acute Carcinomatous Tumor of the Mamma.*

I know not how better to distinguish this disease, than by contrasting it with the others here described, in respect to the rapidity of its progress and the violence of its symptoms, and calling it the acute carcinoma. When several patients afflicted with cancer are in the same ward, there is nothing more remarkable in the local diseases than the difference in respect to their duration, and the rapidity of their progressive changes. The form of the disease I have now to describe is in contrast with the others ; it is both more rapid in its course and more severe in its symptoms.

It begins in a hard tumor or kernel deep-seated in the mamma. At first it is loose and slips about under the finger. After a month or two it becomes attached to the skin and the surface is discoloured. The hardness extends to the whole breast, but some one part projects and is more discoloured, exhibiting a purplish red colour. The surface is shining and elastic, as if it contained a fluid. During this stage the pain is severe, and the tumor shoots like a whitlow.

The breast now enlarges, not uniformly, but in successive divisions of the tumor ; and as it extends, the structure of the skin is evidently affected, and partakes of the disease. The glands of the skin appear to be enlarged, and the surface becomes studded with small white spots, and as the dark red swelling increases, these spots become more distinct. On the most projecting division an oozing takes place ; it promises to suppurate, but no proper suppuration is established. Suddenly the whole tumor swells and inflames with more threatening redness, and increase of pain. Now the countenance indicates pain and anxiety. The skin has a suffused yellowish hue, and the patient feels great lassitude and prostration.

At this stage the disease is hardly to be distinguished from the fungous tumor to be next described ; but when it opens and displays its last horrid aspect, it is sufficiently distinct. After much pain, the enlarged tubercles of the skin become black on the points and break, and discharge a little blood ; and after this, serum drains through the dressings. Suddenly the surface becomes extensively sloughy, and the breast is deeply excavated. I have witnessed a patient remarkably relieved of pain by this opening up of the disease.

On the whole, the tumor does not diminish, it extends ; the great excavated ulcer is irregular, black, and sloughy, and most offensive. The mar-

gins are elevated and tuberculated, and exhibit the same appearance as when first diseased ; they rise high in an irregular ridge ; distinct tubercles burst and discharge, and mortify, and form other deep sloughy ulcers, or rather deep ill-conditioned chasms. The disease extends by mortification of certain of these tubercles. Sometimes a little blood is lost. Still the tuberculated ridge extends, and the most appalling appearance of open cancer is presented.

XIII. *Cancer commencing in the Areola.* This is a rare disease. It begins in the glands of the dark areola which is around the nipple. The glands become tuberculated, and then ulcerate. The disease encroaches upon the nipple, and destroys it by ulceration. A dark zone of discoloured skin extends around the proper ulcerated surface.

Under this cutaneous ulceration the mamma is full, round, and elastic, while the other breast is loose and natural for the time of life. A fungous excrescence rises from the surface, and if it be destroyed, another soon succeeds. If these excrescences be permitted to extend, they exhibit a soft vascular fungus, and in their growth they draw after them, as it were, a general excitement and throbbing, and pain of the whole breast. But if they be destroyed, this excited condition of the breast subsides again.

In the end, when you think you have subdued

the disease, or have succeeded in keeping it in abeyance, symptoms of the constitution partaking of the disturbance, show themselves. The patient becomes emaciated, the countenance of a yellowish earthy colour, pains strike to the back and loins, and she sinks, without the disease of the mamma appearing to be aggravated.

XIV. *The acute fungous Tumor of the Mamma.* When we have made ourselves acquainted with the common course of the carcinoma mammæ, and the changes to which it is subject, we may find ourselves very awkwardly situated, unless we distinguish that, which I am now to describe, from the other diseases of the part. We may be led to say to the friends of a patient—here is a disease which will run its course in four or six years, and yet the patient's fate may be determined in as many weeks!

The tumor occupies the whole gland. The base is hard, and firmly attached to the pectoral muscle; a dark purple or lake colour is spread over the tumor, and characterizes the inflammation. The tumor seems to be about to point in three or four places; the patient entertains the hope that it is going to burst, like a common abscess, and that she is to be relieved. The colour becomes intensely red, and the surface granular.

When it opens it does not contain fluid as you

may have been led to expect ; no confined matter is discharged ; but a fibrous, soft, fungous substance is disclosed, which bleeds. The pain is very severe, throbbing and burning. The patient falls weak, and becomes hectic, pale, and yellow. She sinks rapidly, probably after losing a quantity of blood from the accidental disturbance of the fibrous fungus which projects. Sometimes it bleeds profusely. On removing a poultice, I have seen the blood spout out from a point as from a vein opened with the lancet. In the end, the general hardness has subsided, the prominent, exposed, and ulcerated surface is expanded. It is only prevented from bleeding by the careful application of compress and bandage. Sloughs now appear upon the surface. This state continues but a very few days ; for the patient declines rapidly in strength.

INTERNAL STRUCTURE OF THE CARCINOMA MAMMÆ.

On making a section of the most common, and what we call the true carcinoma, in an early stage of the disease, we are struck with the solidity or density of its structure. The parts seem intimately blended into one mass, and we would be tempted to say, there is a remarkable defect of vascularity ; as if the substance were too dense to admit of free circulation. Though this be an old opinion, we have too many proofs to the contrary.

On examining the section, a hard centre is observed, with bands of a firm white texture diverging from it. There are communicating branches of these ligamentous bands, which form meshes, and betwixt these meshes a distinct substance, a new matter is found.

Both the fibrous diverging texture and the softer substance which is secreted and deposited within the embrace of the meshes, are new textures, not known to the original structure of the mamma. Nor is it quite obvious which is the primary diseased texture: whether the bands, or the matter that is embraced within them. But as the denselined are propagated from the centre, and as they can be traced into the surrounding fat, and the glandular texture, we may presume that this is the original form of the disease, and that the softer substance is only perceived when the disease is more fully developed.

As it is the constitution of many of the natural organs to remain as it were suspended in their growth, and at a certain period to assume activity, and fully develop themselves; so, unfortunately, cancerous tumors have the laws of their constitution; and, after a period of deceitful indolence, they acquire activity, and the structure, which was before too dense for inspection, is fully blown and developed.

I have represented the dense centre and the di-

verging lines in the first drawing.—(*See Plate I.*) This breast I amputated from a lady, who came from the north of England. She lived two years after the operation, and died suddenly of an inflammation of her chest; and the attending surgeon reported to me, that at the time of her death there appeared a hard tubercle on the skin, which was inclined to ulcerate. This circumstance gives interest to the appearance presented in the drawing. For we may observe, that most of the diverging filaments disperse and terminate in the amputated mass. But one longer and larger diverging filament reaches far beyond the hardness which was sensible to the touch during life, and it extends to the utmost margin, and is there abruptly cut off. This must have been cut through, and, consequently, a scion or budding had been left, and hence the return of the disease.

It must be obvious, of how much practical importance this circumstance is; and the question naturally arises—is there any appearance which will, during life, indicate the length to which these filaments may have shot? It is too certain they may have shot far beyond the irregular hardness of the tumor, which can be felt externally. But the retraction of the nipple will indicate the general extent of these bands.

It is of much importance to ascertain the cause of the retraction of the nipple. It is produced by the peculiar carcinomatous texture of filaments,

which rise up from the original centre of the disease, and extend betwixt the ducts of the nipple; these, by condensing and destroying the spongy texture of the part, cause its retraction. Now, it unfortunately happens, that by the time these ligamentous bands have, by extending in one direction, produced the retraction of the nipple, they have, in another, extended into the cellular membrane, beyond the margin of the gland.

How often have we heard, and daily hear, the operation determined upon, because the nipple is retracted; and because thereby the true cancer is announced? Yet, to me, it is quite clear, that if the nipple be fully retracted, and if this has been evident for any considerable time, the operation has been too long deferred.

The second drawing (*Plate III.*) is taken from the breast dissected off the dead body, and where the tumor had run its course to termination in death. Here we see that the hard central mass of the tumor had advanced, and that it now involves the whole substance of the mamma and surrounding cellular texture. The whole consists now of a very solid matter, but in which we recognize still the peculiar texture, and the dense ligamentous bands of the carcinoma.

The third drawing* presents the appearance

* This Drawing (which was exhibited with many others to the Society,) is not engraved for this Part of the Volume.

of the internal structure of a tumor of the mamma, that was by the most competent judges called carcinoma; and, upon consultation, was consigned for operation. On making a section of the tumor, after extirpation, I thought we were fortunate in our determination. Here we see a tumor of the same character, as far as regards the ligamentous meshes, and betwixt these meshes a softer matter contained, which is easily dug out, leaving cells. The nipple too had been dragged down by the progress of the tumor; but the favourable circumstance is, the abrupt well-defined margin of the tumor. Instead of propagating itself by the filamentous bands spreading and embracing the cellular texture, we see here, the disease extended by a small tumor, like to the original one, growing up by its side.

On the whole, this is fully as dangerous a tumor as that exhibited in the first and second drawings, but undoubtedly it is a different disease.

Drawn by C. Fell.

Engraved by J. Vray.

Drawn by G. Bell.

Engraved by J. Smith.