

A probationary essay on scirrhus and cancer in general, but particularly as they are met with in the female breast : submitted ... to the examination of the Royal College of Surgeons of Edinburgh when candidate for admission ... / by Richard Huie.

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A
PROBATIONARY ESSAY
ON
SCIRRHUS AND CANCER
IN GENERAL,
BUT PARTICULARLY AS THEY ARE MET WITH IN THE
FEMALE BREAST;

SUBMITTED,
BY THE AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,
TO THE EXAMINATION OF THE

Royal College of Surgeons of Edinburgh,

WHEN CANDIDATE
FOR ADMISSION INTO THEIR BODY,
IN CONFORMITY TO THEIR REGULATIONS RESPECTING THE
ADMISSION OF ORDINARY FELLOWS.

BY
RICHARD HUIE, M. D.

*Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.*
HOR.

OCTOBER 1822.

EDINBURGH:

PRINTED BY ABERNETHY & WALKER, OLD BANK CLOSE.

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1822.

PROBATIONARY ESSAY

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IN GENERAL,

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WHEN CANDIDATE

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BY

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Edinburgh: Printed by

Candlish, impensis: et non, ad hunc modum.

Hoe.

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OCTOBER 1825.

EDINBURGH:

PRINTED BY ABERNETHY & WALKER, OLD BANK CLOSE.

1825.



TO  
JOHN ABERCROMBIE, M. D.

FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH,

&c. &c. &c.

MY DEAR SIR,

*Seven years ago, I had the pleasure of inscribing to you an Inaugural Dissertation of another kind. Since that time the connection between us is only so far changed, that, instead of Preceptor, you now give me leave to call you Friend. There is an evident propriety, therefore, in my dedicating this Essay also to you.*

*I am not aware that I have advanced any thing particularly new in the following pages. The existence of a set of absorbents, taking their rise in the breast, and following the course of the internal mammary vessels, was first, I believe, pointed out by CAMPER; and Mr PEARSON, in his Principles of Surgery, has directed the attention of the profession to the important fact, that scirrhus or cancerous disease contaminates the system in that direction, at the same time that it affects it in the course of the axillary glands.*

*It may appear to some that I have limited the period too much, during which the operation for the removal of a scirrhus or cancerous breast will be attended with success. It may be so. But the opinions expressed in this paper are those which I conscientiously hold at present on the subject; and as I have neither imbibed them rashly, nor mean pertinaciously to adhere to them in the face of direct and conclusive evidence on the other side, I felt myself called upon to state them candidly and without reserve.*

*I sincerely wish that this Essay had been more worthy of your acceptance; but I trust that you will receive it as a small token of the gratitude and affection, with which I remain,*

MY DEAR SIR,

Your much obliged friend,

and servant,

RICHARD HUIE.

Edinburgh, 22d October, }  
1822.

JOHN ABERCROMBIE, M.D.

FELLOW OF THE ROYAL SOCIETY OF EDINBURGH

Edinburgh

MY DEAR SIR,

Seven years ago, I had the pleasure of receiving from you an interesting  
 Dissertation of another kind. Since that time the connection between us  
 is only so far changed, that, instead of Professor, you now give me leave to  
 call you Friend. There is no violent propriety, therefore, in my address-  
 ing this thing also to you.

I can not assure that I have advanced any thing particularly new in the  
 following paper. The substance of a set of observations, which I have  
 the pleasure and following to count of the interest and importance, was  
 first, I believe, pointed out by (Lamarck); and the I mention in his I in-  
 quiry of language, has directed the attention of the physician to the im-  
 portant fact, that wisdom or common sense constitutes the system  
 of that structure, in the sense that it effects it in the course of the  
 ordinary growth.

To Dr Craigie

With the best wishes of  
 The Author

MY DEAR SIR,

Your most obliged friend,

and friend,

RICHARD HALL

Edinburgh, 2nd October,  
 1825.



## AN ESSAY

ON

## SCIRRHUS AND CANCER.

**T**HAT inveterate and intractable disease, which in the incipient stage is termed SCIRRHUS, and in the ulcerated CANCER, most frequently presents itself to the notice of the surgeon in the form of an affection of the female breast. It may occur, however, in the male breast; and we often meet with it in the lip, the tongue, the stomach, the uterus, and other internal parts. Now and then it attacks the penis, and the testicle; but the latter, I believe, much less frequently than has generally been supposed. In all these parts, the disease may commence its ravages; and from them it may spread to other structures, in which it does not appear ever to occur as an original affection. Thus, though it seems never to commence in the lungs, it may spread to these from the breast; and though it never primarily attacks the muscles, it may extend to them from the neighbouring parts. Every surgeon has seen this in the case of the pectoral muscle, where the breast has been diseased; and Mr BRODIE mentions, in his lectures to the pupils of St George's Hospital, that he has found the *psoæ* and *iliaci interni* muscles studded with small tumours of a scirrhus character, where the patient



had laboured under cancer of the penis. Sir EVERARD HOME relates a similar case\*.

Although this disease might, generally speaking, be considered as belonging to the class of tumours; yet there are two very important features, in which it differs from all other affections of that nature, with the exception of fungus hæmatodes. One is, that the malady is seldom, if ever, purely local, but occurs in connection with a derangement of the patient's general health, and a tendency to visceral disease. The other is, that it possesses a singular power of contaminating the absorbent system, a power which it exerts in almost every instance. In consequence of the first of these peculiarities, the patient often dies of some other disease, while the cancer is going on in the breast; and, in consequence of the second, the surgeon not unfrequently experiences the mortification of seeing the complaint return, after an operation in which he believed that he had removed not only the whole of the morbid structure, but even a considerable portion of the surrounding parts.

Scirrhus generally attacks the female breast about the age of forty, or forty-five, when the woman ceases to menstruate; but it may occur at any period of life after the time of puberty. Under that age it is, I believe, never met with. There is, however, a disease which shews itself in the female breast before the period of puberty, and which might be mistaken for scirrhus; but in those cases the tumour is softer and more diffused, and always disappears as soon as the girl begins to menstruate. Even after the age of puberty, other tumours may form in the

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\* Home on Cancer, Case 1.



breast, which it is of importance to distinguish from scirrhus. Induration and swelling may remain after inflammation or mammary abscess; or the tumour may be encysted, or of a sarcomatous, or scrofulous character. In general, however, the peculiar *symptoms* of scirrhus are so well defined, that there is little difficulty in ascertaining its presence.

Frequently the first thing which is observed is an oozing of dark-coloured matter from the nipple, before any tumour is felt in the breast; but in other cases, the existence of the tumour itself is the first thing that is remarked. This tumour is at first small, and of a stony hardness; it is incompressible, and irregular on its surface, being as it were knobbed, or projecting in various parts; but it has very seldom a determined edge. It is attended by a sharp and lancinating pain, extending at one time from the breast towards the arm-pit, and at another from the tumour towards the nipple. These are the first symptoms that are observed; and if the tumour be superficial, or the woman of a spare habit, they will point out the nature of the disease with sufficient precision; but if the tumour be deep-seated, and the patient fat, the form of the tumour will not be so distinctly felt. By and by, however, the nipple becomes retracted, and as it were tucked in, while the skin immediately surrounding it is puckered and drawn together. At the same time, the integuments over the tumour become tense, shining, and of a leaden hue; and the superficial veins, now very much distended and enlarged, are seen running in every direction from or towards the same point.

Up to this period the tumour is moveable. Now, however, the surrounding parts are completely contaminated



with the disease; the skin inflames and ulcerates; and the inflammation extending backwards to the cellular substance which lies between the breast and the pectoral muscle, the tumour becomes attached to that muscle, and is moveable no longer.

In general, the skin over a scirrhus tumour inflames and ulcerates before the tumour itself has attained any great size. It is not so much, therefore, from being simply put upon the stretch, that the integuments undergo these changes, as from their deeply participating in the disease, which is going on beneath them.

When the integuments give way, a discharge of thin, ichorous, and very fetid matter takes place, and a large, deep, and foul ulcer is exposed. The disease is now denominated cancer, and the following are its characteristic features. The ulcer is deep, with an irregular shining surface, like coagulated blood. The edges are thick, unequal, commonly everted, and extremely painful when touched. A sensation of burning heat is, at the same time, experienced over the ulcerated surface; while the acute and shooting pains which harassed the patient so much before, are now augmented in a tenfold degree. The discharge is such as I have described it, thin, ichorous, extremely fetid, and so acrid withal, as to excoriate in a distressing manner the surrounding parts. It not unfrequently happens, however, that after the first discharge of matter, the disease seems to become stationary, and there is even an attempt to form granulations; but these are of a hard and fungous character, and there is no real suspension of the morbid action. In other cases, the disease spreads by sloughing. A cancerous ulcer is, moreover, at all times liable to bleed; and this bleeding in the advan-



ced stages of the disease is sometimes so profuse, as very much to reduce the patient's strength.

In the meantime, the disease is affecting the constitution through the medium of the absorbents ; and as the first visible consequence of this, the glands in the axilla become indurated and enlarged. In them the disease proceeds precisely in the same manner as I have described it to do in the breast ; and it is communicated, as it advances from one gland to another, until not only all the glands in the axilla, but those which lie under the clavicle, and in the upper region of the thorax, participate in the disease. When the axillary glands are much enlarged, they compress the venous and absorbent trunks of the arm, and occasion a very painful œdematous swelling of that extremity. In other cases, they even compress the nerves, in such a manner as to induce paralysis of the limb.

While the disease is thus contaminating the absorbent system in one direction, it is also affecting it in another. The absorbent vessels which take their rise in the breast do not all run towards the axilla. Some of them pass into glands situated beneath the sternum, in the course of the internal mammary vessels. These glands likewise become affected in cases of cancer in the breast, a circumstance which ought never to be forgotten in proposing an operation at an advanced period of the disease.

It has been made a question among pathologists, whether the contamination of the absorbent system, which follows cancer in the breast, be produced simply by irritation propagated along the vessels, or by the stimulus of the morbid matter imbibed by them, and carried to the glands. Although Mr ABERNETHY leaves the point undetermined, he seems rather to incline to the latter opi-



nion \*. The question, however, is one on both sides of which many ingenious arguments might be advanced. It is true that the glands generally become enlarged, one after another, in the course of absorption; but it is also true that we occasionally see a gland or two diseased higher up in the neck, than the course which the absorbed matter would naturally take; and that one at least of the affections of the surrounding parts, which I am about to describe as sometimes attendant upon cancer in its advanced stages, must be accounted for in some other way, than by supposing that it proceeds from absorption, or from the simple spreading of the disease. Those, again, who defend the idea of absorption may say, plausibly enough, that a few glands may become affected out of the natural course, from the absorbed matter being compelled to take a circuitous direction, in consequence of the induration of the axillary glands; while they, who imagine that they see in simple irritation a cause adequate to account for the contamination of the surrounding parts, may maintain, that when the constitution is so much deranged, as it is generally allowed to be in most cases of cancer, the existence of a cancerous ulcer in their neighbourhood is sufficient to dispose the circumjacent textures to put on the same species of morbid action. The circumstance, however, which most powerfully militates against the unqualified reception of the explanation which absorption affords, is that of the opposite breast sometimes becoming diseased, in consequence of the communication existing between the now enlarged glands beneath the sternum, and those which lie on the other side of the same bone, and receive the absor-

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\* Abernethy on Tumours, page 75.



bent vessels from the hitherto sound breast. In this case, the disease is propagated indeed through the medium of absorbent vessels, but it is not only in a circuitous, but also in a retrograde course. For my own part, I am inclined to believe that both causes may occasionally operate, even in the same case; and I do not consider either of them, taken singly, sufficient to explain all the phenomena, which present themselves in the different stages of this intractable complaint.

Some observers have been of opinion that the matter secreted by a cancerous ulcer is of a specific nature, and that the contamination of the absorbent system is easily accounted for on that supposition. The idea, however, is completely refuted by the fact, that cancer cannot be communicated from one person to another by contact, or even inoculation; the matter of a cancerous ulcer, introduced under the skin on the point of a lancet, or imbibed by a scratch on the finger of a nurse, producing in some cases indeed an ill-conditioned and troublesome sore, but never one possessing a cancerous character.

While the disease has thus been contaminating the system, it has also been spreading in the part itself. The ulcer has been growing deeper, and more extensive; and the integuments in the neighbourhood have become diseased, even without the intermediate parts being affected. The consequence of this, in some cases, is, that a number of small cartilaginous tumours form around the original seat of the disease, until the skin becomes studded with them to a considerable extent. These tumours are of the true scirrhus character; and if left to themselves, or the patient survives their formation long, they will terminate in little cancerous ulcers. Sir E. HOME has seen these



tumours not only in the neighbourhood of the affected breast, but also on the opposite side, and on the back and shoulders; and this even in a case where the original disease had never advanced to ulceration\*. In other cases, the skin surrounding the seat of disease becomes white, thickened and gristly; and its pores become so much enlarged, that they present to the naked eye the same appearance as sound skin would if viewed through a microscope.

We have now come to that stage of the disease when the sufferings of the patient are at their height. Exhausted by the constant and increasing pain, by the continued discharge, and frequent returns of hemorrhage from the ulcer, her strength sinks apace; her extremities swell; cough and difficulty of breathing supervene; and hectic fever and diarrhœa put a period to her misery. Sometimes the patient dies suddenly from loss of blood; but this is not a very common termination of the disease when it is situated in the breast. The mental sufferings of the patient, in this complaint, are scarcely less acute than those of her bodily frame, and certainly tend not a little to shorten her existence.

The length of time which elapses, between the first appearance of the scirrhus tumour, and the termination of the fully developed and uncontrollable disease, in the manner which I have just described, varies exceedingly in different cases. Sometimes the tumour will remain indolent for years: while at other times the progress of the malady is so extremely rapid, that only two or three months will intervene between the first indications of disease, and the total destruction of the affected breast.

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\* Home on Cancer, Case 15.



When we examine with the scalpel (after the death of the patient, or the extirpation of the breast,) a scirrhus tumour in its earliest stage, we find a small cartilaginous lump, and nothing more. But when the disease is a little farther advanced, we find white cartilaginous or ligamentous bands extending from this central tumour into the surrounding adipose substance, like the radii of a circle, or the spokes of a wheel. It is of importance to attend to this circumstance in removing a scirrhus breast; because, if any of these bands have been divided, the surgeon may be sure that he has not removed the whole of the disease. To ascertain this point, he must carefully examine the separated mass; for he will not be able to detect any thing of the kind in the bleeding wound. In some cases, these ligamentous bands insinuate themselves between the fibres of the pectoral muscle, and become attached to the periosteum of the ribs below. In other cases, they coalesce until they form one large and firm cartilaginous mass. Now and then, we find small cysts in the tumour, containing a greenish or watery fluid; in which last case, the tumour has, fancifully enough, been supposed to contain hydatids.

With regard to the general appearances found upon dissection, in the bodies of those females who have died of cancer in the breast, I may mention here that they usually consist of collections of serum in the thorax and abdomen, with organic affections of the lungs, brain, and other internal parts. Mr PEARSON has seen cancer of the breast and of the uterus occur in the same individual\*.

The symptoms which I have mentioned as indicative of scirrhus and cancer in the female breast, are those which

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\* Principles of Surgery, page 254.



present themselves in the most common specimens of the disease. In other cases, however, instead of a small and very hard tumour, we have a larger and softer one, which is at the same time less active, and attains a considerable size before it ulcerates. But if we examine this tumour closely, and attend to its history, we shall find that, though softer and less compact than common scirrhus, it is yet harder and heavier than other tumours; that it is unequal and knobbed upon its surface; and that it has commenced and proceeded in the same way as the more usual form of the disease, being at first a small and almost imperceptible knot, and gradually, regularly, and unremittingly advancing to its present size. When at length it does ulcerate, the discharge of matter is more copious than in the more common cases; but in every other respect the appearance and progress of the disease are precisely similar. In one important feature, however, Mr ABERNETHY believes this case to differ from the others, even in its advanced stages; which is, that it is much less liable to contaminate the absorbent system \*.

The humoral pathologists amused themselves with many idle speculations respecting the *causes* of this dreadful malady. Of these, however, I suspect that we know but little, even in the present day. That it is most commonly accompanied by a derangement of the patient's general health, has already been mentioned; and it is the opinion of Mr ABERNETHY that to such derangement it owes its origin †. Whether this be the case or not, one thing is certain, that the progress of the local complaint bears an evident relation to the degree in which the general health is affected. The knowledge of the fact, that the disease

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\* Abernethy on Tumours, page 86.

† Ibid. passim.



most frequently commences in glandular parts, may afford some assistance in the diagnosis; but it throws little or no light on the origin of the disease. Some authors have entertained the idea, that this complaint arose from an obstruction in the vessels of the gland; but even were we to admit this explanation, we should be no nearer our purpose. An obstruction in the minute congeries of vessels, of which glandular parts are composed, is a very possible and I believe a very common occurrence; but in these cases it only produces inflammation and suppuration in the gland itself, or in the cellular substance immediately surrounding it; which inflammation and suppuration are, except in scrofulous subjects, of a healthy character, and gradually subside without leaving any injurious consequences behind them. Some other cause, therefore, must be at work, either in the constitution, or in the part itself, before any obstruction in the vessels, supposing such obstruction to exist, could give rise to a disease so inveterate and intractable as that under consideration.

That there exists some connection between the appearance of this disease in the female breast, and the peculiar state of the uterine system, can scarcely be doubted, when we consider the time of life at which it usually makes its attack; and are assured, by those observers who have met with it at an earlier period, that it was even then attended by an irregularity or disappearance of the menstrual discharge. There are also many interesting facts on record, (and every surgeon who has turned his attention in a particular manner to this complaint must have seen some such cases in practice,) which go to prove that a woman may inherit a predisposition to scirrhus and cancer, in the same manner, though not perhaps to the same extent, as



she may inherit one to scrofula or gout. In these, however, as in other cases, the disease is generally called into action by some local exciting cause; for there are few females who apply to us for advice respecting this or any other affection of the breast, who do not impute its origin to some blow or other injury sustained in the part, at some former, perhaps distant period.

Are there any tumours which, though not scirrhus in their commencement, may become such in their progress? Or, are there any ulcers which, though not cancerous at first, may assume that character as they proceed? These are questions of very great practical importance, and I suspect that they must both be answered in the affirmative. Sir E. HOME very frankly confesses that he was at one time of a different opinion: but that he afterwards found cause to change his sentiments\*. In fact, if we grant to Mr ABERNETHY, and those who entertain the same views of the subject with him, that there is such a thing as a scirrhus or cancerous diathesis—that is to say, a peculiar state of constitution which produces, or is produced by a disorder of the nervous system, and a derangement of the functions of the digestive organs, and in which different parts of the body, and the female breasts in particular, are disposed to put on a certain morbid action, terminating in the formation of a scirrhus tumour, and eventually of a cancerous ulcer,—I do not see how we can avoid admitting further, that other tumours or ulcers, existing in these parts previous to such a change in the patient's general health, may, upon its occurrence, assume a scirrhus or cancerous character. Mr ABERNETHY, however, does not seem to think that this very often takes place; and

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\* Home on Cancer, page 145.



with his usual candour he mentions, both in his surgical works, and in his lectures to the pupils of St Bartholomew's Hospital, a case which, so far as it goes, would appear to militate against his own opinion. In that case the patient, when between fifty and sixty years of age, had a distinctly scirrhus tumour in her right breast. In or near the same breast she had had a tumour for more than twenty years before; but she insisted that the new disease did not commence in, but by the side of the original lump\*.

The occurrence of such cases, and the varieties which occasionally present themselves in the characteristic features of true scirrhus itself, render the *diagnosis* in some instances not very easy at first. In general, however, the peculiar symptoms of the disease are, as I have already mentioned, so well defined, that we can have little hesitation in deciding upon its nature. The obstinate continuance of the tumour, or its steady, regular, and unremitting progress, notwithstanding all the means which may be employed to discuss it, will very much assist us in doubtful cases; for it is well known to all those, who are much conversant with the disease, that the scirrhus tumour, though it may be impeded in its growth, cannot be made to recede or disappear by the treatment which diminishes the bulk, or favours the removal of other tumours. In this particular, indeed, it resembles tumours of the encysted kind; but the regular form and surface, and the elastic pulpy feel of the latter, together with the total absence of the acute and lancinating pain of scirrhus, sufficiently mark the difference between the two diseases.

The induration and swelling, which remain after inflammation or abscess of the breast, may be distinguished from

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\* Abernethy on Tumours, page 96.



scirrhus, in the first place, by the previous history of the case; secondly, by the swelling being more extensive and more regular, but at the same time much less firm and defined; and thirdly, by the facility with which it may be removed under the application of proper means, means which would accelerate the growth of a scirrhus tumour.

There is a chronic enlargement of one or both breasts, which sometimes occurs at that age at which scirrhus itself is most frequently met with, and which is therefore apt to be confounded with it. I am inclined to consider it of a scrofulous nature, and have reason to believe that it is connected with a tendency to disease in the uterus or ovaria. It is much softer and more extensive than genuine scirrhus; and, though not free from considerable pain at times, is more generally characterised by a permanent feeling of uneasiness in the part.

None of the affections of the breast, which have yet been mentioned as liable to be mistaken for scirrhus, have like it a disposition to affect the absorbent system; none of them consequently are accompanied or followed by an enlargement of the axillary glands; and this in the progress of the disease is a valuable diagnostic mark. There is a disease, however, which occasionally appears in the breast, and which, while it resembles scirrhus in many other particulars, resembles it also in this, that it is or may be accompanied by an enlargement of the axillary glands. This is the pancreatic sarcoma of Mr ABERNETHY, when it is of an irritable kind. Though generally of an indolent character, this species of tumour sometimes occasions great distress to the patient, by being accompanied by severe and lancinating pain, by producing inflammation of the adjoining integuments, and irritating the



absorbents leading to the axilla, in such a manner as to cause an enlargement of the glands in that situation. When of this character, the tumour is seldom large; but the pain is sometimes so acute, as to occasion a degree of feverishness, and considerable debility. Such being the symptoms, it is no wonder that the complaint should sometimes be mistaken for scirrhus; but it is of importance to distinguish them; for Mr ABERNETHY, who has so accurately described the disease, is of opinion that this species of sarcoma may be removed by simple discutient applications, and small alterative doses of mercury; and that, even where it is considered necessary to remove the tumour as a source of pain and irritation, the enlarged glands in the axilla may be left behind, without risk or injury to the patient; their enlargement arising from irritation merely, and not from their being contaminated by, or participating in the local disease \*. Upon examining the case more narrowly, then, it will be found to want many of the characteristic features of genuine scirrhus. It has not the stony hardness, the incompressible feel of that disease; neither does it appear to be attended by any retraction of the nipple, or puckering of the skin. The situation too of the tumour is peculiar; it is generally just upon the edge of the breast, about half-way between the nipple and the axilla; and is supposed indeed not to be a disease of the mammary gland at all, but a morbid enlargement of an absorbent gland which is generally found in that particular spot.

When the cancerous ulcer is fully formed, its distinguishing features are sufficiently well marked. Other dis-

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\* Abernethy on Tumours, pages 38, 39, 40.



eases, however, may be mistaken for it, if the surgeon has not seen the cases before, or receives no account of their history from an accurate observer. The pancreatic sarcoma has not in general any tendency to suppuration; but the irritable species, which has just been described, may, by producing inflammation of the integuments, cause them to ulcerate; a superficial sore is the consequence, the edges of which become inflamed and indurated, the cavity at the same time growing larger and deeper, assuming an unhealthy appearance, and throwing out fungous granulations. An ill-conditioned sore of a similar appearance may be occasioned by an encysted tumour of the breast, when it produces inflammation and ulceration of the integuments, and bursts externally. If the breast is, for the first time, presented to the surgeon for inspection in either of these states, he will experience no small difficulty in distinguishing the disease from genuine cancer, especially if the glands in the axilla are enlarged, as they will probably be, at least in the first-mentioned case. In one point of view, indeed, the diagnosis here is of less consequence, as he will generally find these ulcers equally intractable with cancer itself; but, in another point of view, some distinguishing mark is desirable, because if it be deemed necessary, as it probably will, to remove the breast, the enlarged glands in the axilla need not in these cases be removed along with it; whereas, in genuine cancer, this must be done, otherwise the operation had better not be performed at all. In such cases, too, the surgeon would have it in his power to give a more favourable prognosis, respecting the patient's probable exemption from a return of the disease.

The late Mr HEY of Leeds has described a deep-



seated abscess of the breast, which, as it attacks unmarried equally with married women, and throws out fungous granulations, without exhibiting any tendency to heal, may in some cases be mistaken for cancer. The inflammatory stage is tedious, the abscess being situated as often behind, as in the substance of the gland; and when the confined matter at length finds its way to the surface, it sometimes bursts out in two or three different places, the intermediate portions of the breast feeling hard and painful, as if really affected with scirrhus. The case, however, is to be distinguished from cancer, by the much more healthy appearance of the discharge, by the soft character of the granulations, by the extensive sinuses which are produced by the matter working its way to the surface, by the absence of any affection of the absorbent system, and by the disease being always curable without extirpation of the breast\*.

From what has been said, it will readily be understood that the *prognosis* in all cases of scirrhus and cancer must be extremely guarded. We possess, in fact, no medicine which is capable of curing the disease, even in its incipient stage; and though much may be done, in the way hereafter to be pointed out, to retard its progress towards ulceration, and much to relieve the sufferings of the unfortunate patient after such ulceration has taken place, yet into that state the disease will probably pass at length, and, having once passed into it, will proceed by slow perhaps, but certain steps to a fatal termination, in spite of all that skill can devise, or humanity suggest, to arrest its course. The only prospect, therefore, which the patient

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\* Hey's Practical Observations in Surgery, page 522.



has of a permanent cure, is derived from the complete removal of the affected breast, by a well-timed surgical operation; and, this being the case, it is proper that, in entering upon the *treatment* of the disease, which is the subject of these remarks, I should endeavour to point out the period at which, and the circumstances under which such an operation should be performed, or will be attended with success.

If the tumour is indolent, which is sometimes the case, the surgeon will do well to let it alone; instructing the patient to keep the part as much as possible of an equal temperature, by wearing a piece of soft skin, flannel, or fleecy-hosiery on the breast; and to avoid every thing which has a tendency to overheat or irritate the system. She should be advised, at the same time, to live as much as possible upon a milk or vegetable diet, to take small alterative doses of mercury occasionally, and to keep the bowels open by means of gentle purgatives of a saline nature, such as the Epsom salt, or the Seidlitz powders. These are the means which appear to me to be the best fitted for preventing the disease from assuming an active character, and under their use it may remain stationary for a long period. An operation is evidently unnecessary so long as it does so; and attempts to discuss such a tumour by means of leeches, lotions, or mercurial frictions, will generally produce a very different effect from that which is intended.

If, however, the progress of the disease is evident, and the patient is disposed to submit to the operation, the surgeon ought to perform it while the tumour is moveable, the skin over it sound, and the glands in the axilla remain unaffected; because, under such circumstances, the patient has the best chance of getting permanently rid of the dis-



ease; for though scirrhus is in most, perhaps in all cases, attended by some derangement of the general health, yet in the case which I have described, it has not advanced to that stage, at which the general disorder and the local disease begin reciprocally to aggravate each other. Here, nevertheless, as well as in the preceding case, where the tumour being indolent is allowed to remain, the patient should be cautioned to regulate her diet and habits of life in such a manner, as may best tend to remove the diseased propensities of the constitution, or to keep them in a quiescent state.

But the patient, from a false delicacy, or from some other cause, may not apply for advice until matters have proceeded a greater length in the affected breast. The tumour may have become attached to the muscle beneath, the integuments may be almost or actually in a state of ulceration, and the axillary glands may be enlarged. In such circumstances, if the patient is desirous of having the operation performed, the surgeon ought certainly to perform it, and perhaps it may be successful. I am not sure, however, that he should insist upon its being done, if the patient herself is averse to it; because he cannot tell to what extent the absorbent system is contaminated, the absorbent vessels which run in the direction of the axilla not being the only absorbent vessels which take their rise in the breast, as has already been remarked.

Respecting the next case, I am disposed to speak much more decidedly. If the ulcer is extensive, and has been long open; if the integuments surrounding it are extensively diseased; if they are studded with tubercles, or white and gristly with magnified pores; or if any of the glands out of the natural course of absorption are enlar-



ged, I am of opinion that the surgeon ought neither to advise, nor to perform the operation ; because, although he were permitted, and were able to remove every particle of morbid structure, the constitution (whatever may have been its state at first,) will now have become so completely contaminated with the disease, that it will infallibly return in some shape or other. When both breasts have become affected one after the other, I am also of opinion that no operation ought to be performed.

When the patient has a tickling cough, a difficulty of breathing, or any other symptom indicative of a tendency to visceral disease, the fatal termination can be at no great distance ; and the patient can gain nothing from an operation, whatever may be the state of the local affection.

I am aware that it has been said, that, by the removal of a cancerous breast even at a late period, the patient is benefitted although the disease should return ; because she gets rid, in the meantime, of a disgusting mass of ulceration, and suffers much less when the scar of the wound becomes cancerous, than when the disease is allowed to take its natural course. I do not think that there is much either of humanity or sound sense in this way of reasoning. No patient submits to such an operation, except under the belief that she is for ever to get rid of her complaint ; and no surgeon can estimate the agony of disappointment which such a patient must endure, when she finds that after all the disease has not been removed. In many cases, too, such an operation has accelerated the death of the patient, instead of placing it at a greater distance ; and without questioning the accuracy of their observation, who maintain that when cancer returns after a surgical operation, it does so under circumstances of diminished rigour,



I may be permitted to remark, that, if such be the case, cancer differs as much from other diseases in that particular, as it does from them, under ordinary circumstances, in the peculiar inveteracy and severity of its symptoms.

It was at one period recommended that caustic should be employed, in preference to the knife, for the removal of cancerous parts ; but this method of treatment is now universally condemned. Indeed, it is self-evident that, independently of the increase of suffering which the patient must undergo, neither caustic, nor the actual cautery itself, could ever be so applied to the breast, as to destroy at once the whole of the diseased structure ; and that, unless this could be done, such an application must, from the very nature of the disease, aggravate the symptoms in a tenfold degree. The superiority of the operation with the knife, to the use of caustic, is well exhibited by Sir EVERARD HOME \*.

But the mind of the patient may be averse to the operation, even in the incipient stage of the disease ; or she may have deferred applying for advice so long, that an operation is out of the question. What then is to be done ? Is the disease to be allowed to proceed, in the first case, without any attempt to arrest its progress, because we are possessed of no specific remedy by which we can hope to remove it altogether ? Or is the patient to be consigned to hopeless misery, in the second, because we can do nothing more than alleviate her sufferings ? By no means. We are possessed of remedies which, though they cannot remove, may retard the growth of a scirrhus tumour ; and we are possessed of others which, if they have no other effect, at least correct the fetor and diminish the distress

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\* Home on Cancer, Chap. 10.



attending the progress of a cancerous ulcer. Some of these have doubtless been too highly extolled, while others have perhaps been too hastily condemned; but as most of them are of use at particular periods of the complaint, I shall devote a few words in this place to each, and mention the stages of the disease to which they are applicable.

When the disease is still in the state of scirrhus, and yet is evidently making progress, while at the same time the patient is unwilling to submit to the operation, the growth of the tumour may be retarded by the repeated application of *leeches*, and the use of *saturnine lotions*. These I have condemned while the tumour is in an indolent state, but here the disease is advancing, and we have no choice. If the little coagula of blood, which remain in the leech-bites, irritate and inflame the surrounding integuments, the practice must be intermitted until the inflammation subsides; and, in the event of its return upon the renewed application of the animals, their use ought to be dispensed with altogether. Mercurial and other frictions are decidedly improper, their direct tendency being to cause the disease to assume a more active character. While the above-mentioned applications are employed topically, the patient should be kept upon a very spare milk or vegetable diet; she should also take small alterative doses of mercury \* internally, and keep her bowels open by the use of saline purgatives.

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\* I am aware that, with the exception of Mr Abernethy, the internal use of *mercury* in scirrhus and cancer has been uniformly condemned by modern surgeons. This rejection of a valuable remedy, in a case to which it would *a priori* appear to be peculiarly applicable, has probably been occasioned by its abuse. That the local symptoms of this disease will be highly aggravated by inducing that feverish and irritable state of the system, which attends the exhibition of mercury given for the purpose of exciting salivation, cannot be de-



*Hemlock* has been much recommended in cases of scirrhus; and, though found to be incapable of removing the disease, it certainly has some effect in retarding its progress. It may be given, therefore, in conjunction with the remedies which have already been mentioned, in doses of two grains of the extract, or four of the powder, twice or thrice a-day at first; and the quantity may be gradually increased. Applied in the form of poultice, in the ulcerated stage of the disease, this medicine has a powerful effect in alleviating the pain, and diminishing the fetor of the discharge.

*Digitalis*, *aconite*, and *belladonna* have also been severally employed in cases of scirrhus, but do not seem to have had much effect even in retarding its progress towards ulceration, and hence their use is now almost completely abandoned. They are medicines, indeed, which cannot be given for any length of time without producing disagreeable symptoms.

*Arsenic*, given internally, was at one period considered a specific in cases of scirrhus and cancer, and it is still occasionally employed. It certainly appears to have some effect in retarding the progress of the disease, but not more than other medicines, the exhibition of which, for a length of time, is attended with less danger. Mr PEAR-

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nied; but there is a wide difference between giving it to such an extent, and administering it in those small and simply alterative doses, which alone ought to be given to a patient labouring under scirrhus or cancer. I may mention here, as it is not altogether foreign to the subject, that I have removed, by the exhibition of small alterative doses of mercury, without any local application whatever, a foul and irritable ulcer of the lip, with such an indurated base that it had been pronounced cancerous by three respectable surgeons, and the immediate removal of the part recommended by means of a surgical operation.



son, however, says that he has given it a fair trial in different cases, but that he never saw it produce the slightest benefit \*. If tried, it should be given in solution, and after meals, being less apt to disorder the stomach at those times than when it is taken fasting. One-eighth, or one-sixth part of a grain of the white oxide may be given at first once a-day, and the dose very gradually increased in strength and frequency. As an external application in the ulcerated stage, it possesses powerful escharotic properties; and though in some cases it may improve the appearance of the sore, there can be no doubt that in others it does much harm. Very dangerous and even fatal effects have been produced, by sprinkling the white oxide in substance upon the surface of a cancerous ulcer.

The *muriate of barytes*, which was once employed in so many diseases, has also been tried in cancer, but with no apparent benefit. The *sulphate of copper* has now, in like manner, fallen into disuse.

When the disease has passed into the ulcerated state, very little can be done by the internal exhibition of medicine, even in the way of retarding the progress of the disease. Small alterative doses of mercury, however, and a little saline medicine, may be still administered from time to time. The use of the hemlock may also be persevered in, if it be found to alleviate the pain. When it ceases to do so, it may be given up, and *hyoscyamus* substituted in its place; and this last, in its turn, may be exchanged for *opium*. It is an observation of my valued friend and instructor Mr C. M. CLARKE, that in cancerous, and indeed in all complaints where the sufferings of the patient are lengthened and acute, we should learn to husband well our

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\* Principles of Surgery, page 277.



means of giving her relief, and exhibit the less powerful narcotics first, proceeding, when these have lost their effect, to administer such as possess greater efficacy \*.

In the meantime relief will also be obtained by the local application of the *decoction of poppies*, or of the *hemlock* or *carrot poultice*. All three possess nearly equal powers in diminishing the pain, but the two latter have the additional good effect of correcting in a high degree the fetor of the discharge. *Carbonic acid* has also been applied to cancerous ulcers in the form of the yeast poultice; or of the gas itself, confined over the part by means of a glass or bladder. At first it has appeared to do good, the discharge becoming purer, and the granulations more healthy; but these flattering appearances have seldom lasted long, the sore speedily returning to its former state. Some surgeons content themselves with applying *absorbent powders* to the sore, while others prefer cooling and astringent *ointments*. Pure *oil* has also been employed, but I am at a loss to conceive on what principle.

All these medicines, however, whether internal or external, are only to be regarded in the light of palliatives; and are not to be trusted to in any case where the disease is evidently advancing, and it is still in our power, by a surgical operation, to remove the whole of the morbid structure. It is necessary, nevertheless, to be acquainted with them, since there are many cases in which the patient will not consent to the operation until it is too late, or to which, from the first moment of our seeing them, the operation is inapplicable. In such circumstances, all that we can do is to retard, by such means as we possess, the progress of the disease towards ulceration; and when that

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\* Diseases of Females, part 2, page 232.



has taken place, to smooth as much as possible the avenue to the grave.

I have purposely avoided making mention, until now, of two methods of treating scirrhus and cancer, to which the attention of the public has of late been a good deal directed ; because, with the views which I entertain of the nature of the disease, I cannot conceive any circumstances under which they can be of use. These are the internal and external employment of the *carbonate* and other preparations of *iron*, as recommended by Mr CARMICHAEL \* ; and the powerful and long-continued application of *pressure* to the affected part. It is no uncommon thing in medicine, as in other branches of physical science, for different individuals of equal powers of observation to draw different conclusions from the same series of experiments ; neither is it very unusual to find different practitioners publishing to the world, at the same time, the successful results of different and even opposite plans of treatment in one and the same disease. Such contradictory statements we shall always be liable to meet with, while the science which we cultivate remains so uncertain as it is. Hence it is necessary to exercise our own judgment on every new proposal ; and if it is at variance with our preconceived ideas of the nature of the complaint, to subject it to the test of experiment ourselves, or to wait until those who have better opportunities have ascertained its merits in a similar way. Iron given internally, is a tonic, and a powerful one ; it quickens the circulation, increases the powers of digestion, and at the same time has a tendency to constipate the bowels. We require, therefore, considerably

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\* Essay on the Effects of the Carbonate and other Preparations of Iron upon Cancer, &c.



more experience of its efficacy in the disease under consideration, before it can be acknowledged as a medicine of any value, in cases which have hitherto been supposed to be benefitted by remedies which produce very opposite effects; especially when we know that other medicines of the same class with this have, at different periods, been as highly extolled, though they subsequently fell into disrepute, and are now altogether abandoned. As an external application to cancerous ulcers, perhaps it may be employed with benefit; but I should expect it to produce less salutary effects, than those dressings which at once correct the fetor of the discharge, and diminish the sufferings of the patient.

Respecting the alleged utility of pressure in scirrhus and cancer, the experiments which have been instituted in the Middlesex Hospital, under circumstances the most favourable which can be imagined, enable me to speak rather more decidedly. From these experiments, it appears that many patients are unable to endure the confinement which the bandaging occasions; and that, in those cases where they have been induced to persevere, and where the external convexity of the tumour has been apparently diminished, the disease has in the mean time been compelled to extend itself among the fibres of the pectoral and intercostal muscles; the pressure rather accelerating than retarding its progress, by occasioning absorption of the surrounding fat, and condensation of the cellular substance. Many scirrhus tumours also have passed into the state of ulceration, even during the application of the pressure; and, upon the whole, this method of treatment appears rather to have hastened than delayed the fatal termination of the disease\*.

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\* See Mr Charles Bell's Surgical Observations, Part I.



It now only remains that I describe the *operation* for the removal of a scirrhus or cancerous breast.

It is a general rule among surgeons in performing this operation, to remove the whole of the affected breast, however small the scirrhus tumour may be; and the rule is a very proper one; because such, in these cases, is the state of the whole gland, that were the operator only to remove a portion of it, the disease would infallibly return in the remainder, even though every particle of morbid structure appeared to have been removed. But while all surgeons agree that the whole gland should be removed, and even a considerable portion of the surrounding fat, some are very unnecessarily solicitous about saving the skin, a thing which should never be done in cases of cancer, beyond what is absolutely necessary to cover the parts beneath after the operation is over. The nipple ought to be removed in every case; the disease, when it returns at all, generally making its first appearance there.

Many surgeons perform the operation with the patient in a sitting posture, the operator himself either sitting or kneeling before her. Mr ABERNETHY, however, in his lectures to the pupils of St Bartholomew's Hospital, recommends that she be laid in a recumbent posture, because, when so placed, she is less apt to be overcome by syncope, and the surgeon is more likely to discover and secure all the vessels that require to be tied.

Having caused the arm of the affected side to be extended, the surgeon first marks out with his eye the portion of integuments which he is to remove, and then insulates it by means of two rapid semioval incisions, in the



course of the fibres of the pectoral muscle. In this, and indeed in all the subsequent steps of the operation, it will be found advantageous, when the patient is sitting erect, to divide the lower parts first; because, when the reverse is done, the hemorrhage from above is apt to obscure the parts which are to be divided by the next incision. The next thing to be done is to separate the gland of the breast, and part of the adipose substance in which it is imbedded, from the surrounding parts down to the pectoral muscle. This is to be done with free strokes of the scalpel, and Mr ABERNETHY thinks that, if the patient is at all fat, the separated portion should comprehend at least every thing that lies within an inch of the morbid parts. If this part of the operation is well done, a few strokes of the scalpel will now suffice to separate the whole from the muscle beneath, when the operation is over, unless any of the glands in the axilla are enlarged. The surgeon, therefore, carefully examines the separated mass, to ascertain whether any of the white ligamentous bands formerly mentioned have been divided. If so, he must endeavour to find out and remove the remainder; but if there be no appearance of such division, he has the satisfaction of having removed the whole of the morbid parts.

If any of the glands in the axilla are diseased, they must of course be removed, otherwise the operation had better not have been performed at all. For this purpose the incision is to be extended from the upper extremity of the wound already made, as far as the diseased gland, for I shall suppose that there is but one. The skin is then to be raised from the parts beneath, and all the adipose and cellular substance removed which lies between the breast and the enlarged gland. The gland itself is next to be



laid hold of with a tenaculum or dissecting hook, and freed from its lateral attachments; after which a ligature is to be passed round its root, and tied firmly: the gland may then be cut away without any danger of hemorrhage, which, from the shortness of the vessels and the depth of the parts, is not easily restrained in this situation, when the gland is cut away without any such precaution. When two or more glands are diseased, a needle with a double ligature may be passed through the cellular substance connecting the mass to the parts beyond them; after which the needle may be cut away, and one ligature tied round each half of the base, before the diseased parts are removed. This part of the operation is much facilitated by placing the patient in a recumbent posture, as recommended by Mr ABERNETHY, and extending the arm, so as to allow as much light as possible to fall into the axilla.

When all the diseased parts have been removed, the arteries of the breast (which are principally branches of the long thoracic and internal mammary arteries) are to be taken up on the point of the tenaculum, and secured by ligatures. Some surgeons are in the habit of doing this as the vessels are divided in the course of the operation; but there is no necessity for it, and it is better to finish the operation at once. It will be proper, however, for the assistant to place the point of one of his fingers on every vessel of any size that is divided, not only to mark its situation, but to prevent any unnecessary loss of blood. It will also be proper, when the operation is over, to encourage the patient, to give her a little wine and water, and to throw a blanket round her, so as to remove any tendency to syncope or sensation of coldness, which might prevent us from detecting any vessel which ought to be



tied. A hot sponge applied to the wound will also promote the bleeding, and assist us in attaining our object. When all the vessels have been secured, one end of each ligature is to be cut away, and the other brought out at the extremity of the wound to which it happens to lie nearest, or at the middle if it lies far from either. All are then to be pulled straight, and the lips of the wound brought together by means of strips of adhesive plaster; a pledget of soft lint is to be applied over these; and the whole supported by a firm compress, and a broad linen roller passed two or three times round the body, and prevented from slipping down by means of a scapulary thrown over the shoulders, and pinned to it both before and behind. A separate compress will be required for the wound in the axilla. Mr BRODIE thinks it better to dress this part of the divided surface with lint only, because the parts are deep, and not likely to unite from the bottom by the first intention, in consequence of which a sinus will be apt to form in the axilla. In dressing the wound, and retaining the parts in contact, the advantage of making the incisions in the direction of the fibres of the pectoral muscle is distinctly seen; for even when this muscle is thrown into action, the edges of the wound are not separated at all. It is evident, however, that their union, and that of the whole wound, will be very much promoted by keeping this powerful muscle at rest; which may be done by confining the arm of the same side in a sling, or, what is better, by including it in one or two of the turns of the roller.

The patient is now to be put to bed, and to have an anodyne draught.

This is an operation which is extremely apt to be followed by secondary hemorrhage from the small vessels, ow-



ing to their being so near the centre of circulation. To prevent this as much as possible, we should be particular in trying every vessel which we can detect, and keep the patient very quiet and cool after the operation; not allowing her to make the slightest exertion, or to drink any thing but what is cold, at least during the first eight or ten hours. The same effect of preventing secondary hemorrhage will also be promoted, and the adhesion of the divided parts accelerated, by having the dressings wetted from time to time with a cooling spirituous lotion, or one of simple vinegar and water. I have known ice applied over the dressings for the same ends.

In five or six days the ligatures will all come away, and in a week or two more the wound will be completely healed.

I have already mentioned that, even after the earliest and most satisfactory operation for the removal of a scirrhous or cancerous breast, the patient must still consider herself in some measure liable to a return of the disease; and must be instructed in what manner to regulate her diet and habits of life, so as most completely to guard against an occurrence at once so fatal to her own hopes, and injurious to the professional character of her surgeon. I conclude these remarks, by stating it as my decided opinion, that, if the disease should unfortunately return, either in the wound itself, or in the opposite breast, no second operation ought ever to be performed.

THE END.