CLINICAL LECTURE

ON

THE COMMON DISEASES OF THE BREAST.

Delivered in University College Hospital.

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TO-DAY I will speak of the common diseases of the breast. Some of them you may see here in the wards of the hospital, and others you will have opportunities of seeing, I have no doubt, in the out-patient departments, and you may also meet with them in private practice.

First, let me say a word with regard to atrophy of the breast. You will, of course, find different individuals with their breasts differently developed; for in some families there is hardly any development of the mammary region, while in others you find that all the girls are full-breasted. The practical surgical point is whether or not the breast is sufficiently developed, particularly the nipple, for the duties of maternity. That is where the atrophy of the breast, if we may so call it, becomes important in practice. If you are retained to attend a woman in her first confinement, it is quite worth while to take a little trouble before she is confined to see that she is able to nurse the child which will be born. Many women have very sessile nipples; and you must remember that the nipple is not merely a series of ducts for the passage of the milk, but that there is a large quantity of involuntary muscular fibre in it, and it is because of that involuntary muscular fibre that the nipple, when it is excited, becomes more prominent, thus enabling the child's mouth to retain it. You may notice that when a child is first put to the breast it will not be able to grasp the nipple, but, by poking its nose and mouth against it, it excites the nipple, so that it becomes more prominent, and then the child can hold it.

It is quite worth while to draw out the nipple, if it is too sessile for the child to get at it, by an ordinary breast-pump. The old-fashioned breast-pump, I suppose, has quite gone out of use. The more modern instrument is one with which a woman can draw the breast herself, and may be seen in all the chemists' shops. It consists of a little glass shield, with a mouthpiece coming off from it, at which the woman can suck, so making a vacuum; and the milk then comes away and collects in the lower part. But a little friction also may do good in developing the nipple—a little gentle rubbing, too, will harden the skin, and that is an important matter. But let me say that if friction is carried on to an abnormal extent, it may produce hypertrophy of the breast, which is a serious thing, leading to amputation.

You will find that the monthly nurse, if she is a good one, will take a little trouble to bathe the nipple of a primipara with a little brandy and water, which is a common recipe, and a very good one; but one great reason why nipples become sore is that they are so constantly wet. You may not be aware that many women suffer from an involuntary flow of milk from the breast, so that their clothes are apt to get wet, and I have here a little contrivance to be used in cases of that kind. It is a little glass, into which the nipple can be slipped, and it can be worn under the dress. The milk which is superfluous accumulates in the lower part of the glass, and does not wet the breast. It is a great point that the nipple should be dry, and that it should be protected when it is not being used; otherwise it is apt to become what is commonly called "chapped." Now a chapped nipple is the beginning of a series of troubles, and it should therefore be cured as soon as possible. I have asked in the midwifery department of the hospital what is now the favourite remedy for chapped and sore nipples, and I am told that it is glycerine of tannin and sulphurous acid, of each half an ounce, with one ounce of water. You have there the astringent effect of tannin and sulphurous acid, and I have no doubt that it is a good remedy. There are fifty remedies for chapped and sore nipples; and perhaps one of the best surgical ones is nitrate of silver, if properly applied. The great mistake made in the application of nitrate of silver for a sore breast is taking a stick and rubbing it on promiscuously; you then have a great patch of eczema, and you may

have a large sore on the nipple. The proper way is to take a fine camel-hair brush and wet it with a ten-grain solution, or draw the brush over the stick of nitrate of silver, and, having thoroughly dried the nipple, to paint into any little crack that you can see.

Some sore nipples evidently depend upon the condition of the child's mouth. A child with an aphthous mouth is apt to produce a sore condition of the nipple. It is difficult to treat, and no doubt it may be communicated from one child to another; for if a healthy child is put to a nipple of that kind, it may possibly get thrush. Borax is the great remedy for the complaint—the old-fashioned borax and honey, or the more modern glycerinum boracis, applied freely to the child's mouth, and also to the nipple of the mother.

These are comparatively simple cases; the complicated and important one is when syphilis is present in the child's mouth. When you get into practice you cannot be too much on your guard about syphilis, that is to say, you must keep your eyes open but your mouth shut. If you bear it in mind, you will avoid the errors into which practitioners are sometimes led, both as regards the mother and as regards the wet-nurse, which is an important point. A woman, we will say, has borne a healthy child, and she is unable to nurse it. A wet-nurse is engaged, and you find some time afterwards that the child develops a coppery rash upon the body, with all the symptoms of constitutional syphilis, and it becomes clear that the child has been syphilised by the nurse. Such cases have occurred from time to time, and they are extremely serious. It is very important that in selecting a wet-nurse you should go thoroughly into the history of her previous life, and inquire whether she has suffered in any way from sores about the genitals, or whether she has had secondary, or, possibly, tertiary symptoms. Generally the wet-nurse is young, and will not be likely to have got so far as tertiary symptoms; but it is not uncommon for a young woman to have unconsciously secondary syphilis from a husband, or in other ways, because wet-nurses are not always married. You find, perhaps, that there is some evidence of syphilis in the throat, and she may communicate this to the child she suckles by kissing it.

I do not think there is any proof that syphilis can be communicated through the milk, but what more often happens is that the woman's nipple becomes a little sore, then you get the child's mouth infected, and all the symptoms of constitutional syphilis develop, and it has sometimes happened in such cases that the syphilised child has been put to the nipple of a healthy woman, and has again communicated syphilis. You cannot be too particular in the choice of a wet-nurse, and you should be most particular in looking at the child that you give to the wet-nurse. If you have delivered a woman who is unable to nurse her child, and who is the subject of syphilis, the child will undoubtedly within a month or six weeks after birth develop congenital syphilis; and if you have already put the child to a wet-nurse, the chances are that it will communicate syphilis to her, and then trouble may arise—an action might be brought, or remuneration would have to be made. I draw your attention to these things because mistakes are sometimes made simply through inattention to them.

Now, supposing a patient has a simple ordinary sore nipple, what bad results may result from it? The first thing is that the unfortunate woman with a sore nipple is almost unable to nurse her child. The nipple is so exquisitely tender that when the child is put to it, the woman, whether the mother or not, cannot bear the pain. Under those circumstances, of course you have to do something, and the best thing you can do is to provide an artificial nipple. A glass shield, like that which I hold in my hand, is the usual thing. Upon it there should be fitted an ordinary india-rubber teat, and if that is placed over the nipple, and the nipple is made to go well into it, with a little suction by the child's mouth the milk flows, and there is no irritation of the nipple. You can then proceed with the medication of the nipple, without doing harm to the child.

But it often happens that the woman neglects herself. She has got a sore nipple, she cannot nurse the child, and she allows her breast to become gorged with milk, which is the first stage of inflammation of the breast. You will sometimes have a woman come to you with a breast as full of milk as the unfortunate overstocked cows that are sometimes driven to the fair, not having been milked for twenty-four hours before selling, in order to show the purchaser that they have good udders of milk. The woman suffers in the same way as the lower animal; the distension of the breast is extreme, and there is great weight and distress, and, if it is not

shortly relieved, it soon ends in inflammation. The mode of relieving it is a simple matter. The milk may either be drawn with a pump, or the breast may be relieved very much by gentle pressure of the hands, the operator standing behind the patient and compressing the breast, so that the milk is squeezed out without difficulty. I say gentle pressure, because if you use anything like violent pressure, you may do a great deal of harm. In the case of new-born children, one sometimes sees a foolish old monthly nurse, who observes a little fluid coming away from the breast of a child (which is not at all uncommon), set to work vigorously to squeeze it out, and every now and then you get in such cases an abscess in the breast of a new-born child. If, as I have said, the woman's breast is gently squeezed, the milk exudes, and the trouble may pass off. If it is necessary to stop the milk in the breast—if, for instance, the child has died, or has been taken away from the mother, and the breast simply becomes overloaded, then there is nothing so good as the application of belladonna. At the present time in this hospital, and, I think, a good deal through my efforts and teaching, we use belladonna for most local inflammatory ailments; but originally the use of belladonna was introduced for breasts in which we wanted to arrest the secretion of milk. There is no doubt that the application of belladonna mixed with glycerine is the very best remedy that you can have for that kind of case. Well and thoroughly applied over the breast, it tends to arrest the secretion of milk, relieves pain, and prevents the occurrence of inflammation. Then suppose we have the breast not properly emptied, it having gone beyond that stage before you see it, you certainly will have inflammation set up in the breast—general mastitis, if you like to use the word. There are two theories with regard to that inflammation. I believe myself that in the great majority of cases it begins, as I have described, in distension of the milk ducts; but some authorities believe that the inflammation travels up the ducts from the sore nipple, and they say that the nipple is the direct cause of the inflammation. Be that as it may, you find all the symptoms of inflammation, namely, swelling, heat, and redness, and the great thing, of course, is to relieve it as soon as possible.

If there is one thing that a woman, who has a sore breast, objects to more than another it is to having it, as she calls it, "lanced." If you say to a patient that you are going to lance her abscess, she will probably button up her dress and disappear, and you will not see her again. When I used to see the out-patients I generally got over the difficulty in cases of this sort by avoiding the word "lancing," and by making no open show of knives and basins. If you open your lancet behind your back or in your pocket, and then just make a puncture, which is really all that is required, you can let out the abscess without any great difficulty, and your patient will be only too grateful for what you have done. Of course, if you are going to open an extensive abscess, it is wiser to give the patient chloroform; but if you have not the opportunity of giving chloroform, you must act artfully and open the abscess quite sufficiently without giving the patient any pain; the puncture is so momentary and the relief of tension of the abscess is so great that the operation is really painless.

With regard to the opening of an abscess of the breast, in what direction should you open it? No doubt the best plan is to open in the direction of the ducts as far as possible. Of course, you know that from the nipple in the middle there are straight ducts, as they are called, radiating, and then the lobuli of the breast are arranged all round, so that in making the incision anywhere near the nipple you should always make it in a line radiating from the nipple, and you should make it, as far as possible, in a dependent position. Of course, if the abscess happens to be in the upper part of the breast, an incision should be made immediately above the nipple, that is as good a position as you can have; but if the abscess is in the lower part of the breast, clearly you must make it lower down. You must make a dependent opening wherever it is, and you must remember the anatomy of the gland so as not to cut the essential parts of the breast across more than you can help. In the wards, from time to time, we see cases of abscesses of the breast, and they are invariably the neglected ones, for we do not ordinarily take in cases of common abscess of the breast. Mr. Holder has given me the notes of three cases which we have had in the wards this year. I will not trouble you with the details of two of them, which are very common cases, but will pass on to that of a woman named E. B., which I will give a little in detail.

She was aged 21, and was admitted on June 27th. She was confined with her first child (these abscesses generally occur with

the first child) on May 30th, 1888. She tried to suckle the child for two days, but had not enough milk.

On June 15th she had great pain in the right breast, and during the night the breast swelled to a great size.

On June 16th the breast was poulticed till the pain ceased. The left breast swelled in a similar way, and it was poulticed.

On June 17th the right breast began to discharge about the lower border, and very soon a number of discharging points formed, and a large amount of pus flowed during the following week. Within a few days the left breast began to discharge, but it was never so bad as the right one.

On June 26th the right breast ulcerated right through above the nipple. The lower part of the breast being thus detached fell downwards by its own weight, disclosing a large abscess-cavity between the breast and the pectoral muscle.

On admission the right breast was pretty well converted into a large abscess. At the top, two inches above the nipple, many discharging points joined together, forming a large, irregular, ragged wound of a linear character, chiefly transverse. The result was the falling of the breast in a flap downwards, exposing the whole cavity of the abscess. Those who saw the case can hardly forget it; the condition was so remarkable on account of the enormous destruction of tissue, and the large abscess, which was very widely open. The abscess was submammary, the floor being formed by the pectoralis major, the falling flap containing the whole thickness of the breast, and, except for a questionable portion below, its whole substance.

This is an exaggerated example of the bad effects of over-poulticing. I do not know whether the woman had medical advice or not, but she seems to have been advised to poultice, and that is just what is done domestically; they go on poulticing until they reduce the vitality of the part, and the whole of the tissues have become undermined by suppurative, and then at last the patient has to come into the hospital. Let me remind you of what was done before I show you the patient. The great point at first was to support the breast, and you may remember I insisted on its being properly supported with plaster. It is of no use bandaging in these cases, but with long strips of plaster properly applied you can make the pressure sufficient to bring the parts into position.

You now see from the appearance of the patient before you, that the description Mr. Holder has given is perfectly correct. There is a great transverse cut running across the breast, and the whole breast fell down. On the other side you see there are scars of a less severe suppurative, a part of the breast was a good deal undermined, but it was nothing compared with the right side.

As regards the treatment of these mammary abscesses, in the first place let me say that I do not deary poultices. You must have heard me say in the wards that I have not lost my faith in the old fashioned linseed poultice, and I believe it to be an extremely comfortable thing if properly applied, and if the breast is properly supported. The great mistake is keeping it on too long. A bad breast should be held up either with a silk handkerchief or a bandage. If it is kept up and well supported, I have no objection to poulticing for a few hours, but as soon as there is any matter present it ought to be let out. That is the difficulty—that the matter is not always at the surface—and the surgeon hesitates because his finger is not sufficiently educated to be sure whether there is any matter or not, and he allows it to burrow; whereas if he were more up to his work he would have made a timely incision, and saved all the trouble. For myself I would much rather make an incision uselessly in a case of that kind before the matter is formed than I would allow the matter to burrow, even twelve hours after it was formed. You do no harm by an early incision, for if nothing escapes you withdraw the knife, and the puncture soon heals; but if you find the matter deeper than you expect, and it wells up beside the bistoury, you have only to enlarge the opening, and the matter flows out.

If the case comes before you after the matter has burrowed, a great deal can be done by the modern system of putting in drainage tubes, which in these cases are extremely useful. You put a properly arranged drainage tube, so that the opening shall be dependent, and the matter finds its way out, and you relieve the patient materially. Here, again, let me warn you against putting in too many drainage tubes and keeping them in too long. There is sometimes a tendency, when a drainage tube is put in, to leave it in indefinitely, whereas it does all the good it is likely to do in two or three days. You will notice how soon we remove drainage tubes here in cases of amputation and the like. It is of

no use to leave them in a long time; in fact, they become practically setons.

Then let me give you another caution. Be careful that you do not lose your drainage tube. I have more than once seen cases in which a breast has been drained, I have no doubt very properly, but unfortunately the surgeon has lost a piece of the drainage tube. Months afterwards the patient in such a case comes back, and there is a great hubbub because the piece of drainage tube has come out of a sinus, and naturally the patient appreciates the fact that the trouble has been kept up by the tube. You should, therefore, have strings to your drainage tube, or you may adopt the plan you have seen me use of putting a safety-pin through the end of it, which, I think, is better, because it always keeps the end of the tube flush with the skin.

So much for the ordinary form of abscess. Let me remind you that you may have mammary abscesses in different situations. There are three common situations in which an abscess may form. First, you may have it in these straight tubes round the nipple. One of these little tubes is blocked by epithelium; the tube then becomes distended with milk. If you see it, you may open it, and call it a little lacteal tumour if you like; but, if it is not seen and treated, it is apt to suppurate, and then you get a little elongated abscess close to the nipple. The treatment is quite obvious and simple, and you merely incise it. A more serious case is the one I have described—an abscess in the substance of the breast. Then, lastly, there is the form which you meet with occasionally, but not commonly—an abscess under the breast. In the case the notes of which I have read to you, by the time the patient was admitted the abscess had got under the breast, but I do not think that it was so originally. But there are cases in which the cellular tissue between the breast and the pectoral muscle becomes inflamed and the abscess forms there, and you have the remarkable feature of the breast being thrust forward by a swelling behind it; and the fluctuation, instead of being through the breast, is at the margin of it, and usually the lower margin. In these cases, of course, you would make a free incision below the breast and let the matter out. It runs out readily, and afterwards, by judicious pressure, you bring the breast back again into its original position, and it soon gets a firm attachment. Those are comparatively simple cases if they are recognised, but I have known an abscess of that kind to be taken for a much more serious disease. The patient was thought to have a rapidly-growing tumour of the breast, which, after a time, resolved itself into a small abscess over the pectoral muscle.

Let me now say a word with regard to a simple matter, but one which is sometimes misunderstood from the want of having seen it. There is a disease of the skin which we know as molluscum contagiosum, which is found upon children's faces, and which you may sometimes find upon a woman's breast. It is a little collection of sebaceous material, and if examined microscopically will be found to consist of cells packed together in lobular masses, bounded and separated by fibrous tissue. Some authorities do not agree as to its being contagious, but I have no doubt it is contagious in this sense, that if a child happens to have it on its face—a common situation—you will find that the mother's breast will become inoculated, and there will be a development of molluscum contagiosum upon it. I have here a picture of it. You see the sebaceous material collected in the follicles of the child's face, and there is exactly a similar disease produced upon the mother's breast. I am not sure that it can be communicated from the mother to the child, but I am sure that it can be communicated from the child to the mother. It is not a serious thing, but you ought to be able to recognise it. The treatment is to squeeze out the little sebaceous collections, which heal up readily enough, as the ordinary comedones do on the face. Then there is another thing which is occasionally found on the skin of the breast—that is keloid. It is not common, and I mention it for that reason. You may meet with a patient who has developed keloid on the skin of the breast, which is very apt to be mistaken for a more serious disease. At first it is hard, and looks a little like scirrhus. I simply mention it that you may have your attention called to it.

It is stated that last week there were no fewer than 2,806 bathers in the baths of Bath, and the receipts from bathers and water-drinkers amounted to £200.

MEDICAL MAGISTRATE.—Dr. Arthur Flint, of Westgate-on-Sea, has, on the recommendation of Earl Granville, been placed on the Commission of the Peace for the Liberties of the Cinque Ports.

REPORTS TO THE SCIENTIFIC GRANTS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

REPORT ON THE COCA ALKALOIDS.

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OUR PRESENT KNOWLEDGE OF THE ALKALOIDS FOUND IN COCA.

SINCE the leaves of the coca plant have been worked on a large scale for the extraction of cocaine, it has become apparent that there is obtained from them, besides cocaine, a considerable quantity of amorphous substance having the easily recognised chemical reactions of alkaloids. The end result of treating the leaves is usually a mixture of cocaine with more or less amorphous material, but as cocaine and its salts crystallise readily from many menstrua, while the other substances do not, a separation can thus be effected, and by repeated crystallisation from alcohol pure cocaine salts may be easily enough obtained.

The accompanying amorphous material got by different manufacturers varies greatly in quantity, composition, and appearance, owing probably to differences in the process employed and in the amount and nature of the alkaloids originally present in the leaves. There has been great divergence of opinion regarding its exact composition, but it now seems probable that the specimens examined by the various observers were by no means identical. Some of them consisted almost entirely of crystallisable cocaine mixed with hygrine and other bodies, being thereby prevented from crystallising; while others were a mixture of alkaloids, prevented from crystallising by the presence of impurities. The amorphous substance consists largely of a single alkaloid, which has been named isatropylcocaine by Liebermann,³ and has been very fully described by him. Hesse described two new bases under the names cocaidine⁴ and cocamine,⁵ but he is now of opinion that cocaidine is a mixture, and that cocamine is identical with isatropylcocaine.⁶ Lately, Einhorn⁷ has signalled the discovery of another alkaloid, but very little is as yet known about it.

With our present knowledge, the total quantity of alkaloids, other than cocaine, in the leaves can only be roughly estimated, but it is, relatively speaking, very considerable, and must have a marked effect in determining the action of coca. In attempting an estimation we have, however, some data to go by. Owing to the deterioration in quality which the leaves suffer in transit, there is now made in South America a large quantity of "crude cocaine," this being a mixture of all the alkaloids which can be extracted. It is a perfectly white amorphous powder, often in masses, has a tobacco-like odour, and yields crystalline cocaine when treated with proper solvents. Dr. Squibb informs me that the mixed product from the Truxillo leaf is considered to yield about 50 per cent. crystallisable cocaine, while that from the Huanaco leaf yields about 75 per cent. In a sample examined by Dr. Paul⁸ 42 per cent. only was present. The amorphous alkaloids are thus seen to vary from 25 to 58 per cent. of the total alkaloids obtainable from coca. In any case they must be an important constituent, for if we take the amount of cocaine in the leaves as, roughly speaking, 0.5 per cent., then their proportion will be about from 0.2 to 0.6 per cent. Hesse states that in one variety of leaf there is 0.6 per cent. cocamine (isatropylcocaine) and that the amorphous alkaloids vary in amount and nature according to the leaves from which they are derived.⁹ As we shall see

¹ Stockman, *Pharm. Journ. and Trans.*, xvii, (3), 861, 1887.

² Lyons, *Amer. Journ. of Pharmacy*, October 17th, 1885.

³ Liebermann, *Ber. d. deutsch. chem. Gesellsch.*, xxi, 2342, 1888.

⁴ Hesse, *Pharm. Journ. and Trans.*, xviii, (3), 437, 1887.

⁵ Hesse, *Ibid.*, 71.

⁶ Hesse, *Berichte*, xxii, 665, 1889.

⁷ Einhorn, *Berichte*, xxii, 339, 1889.

⁸ Paul, *Pharm. Journ. and Trans.*, March 17th, 1888.

⁹ Liebermann, Einhorn, Hesse, *Berichte*, loc. cit.