OPERATIVE SURGERY

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BREAST

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PART XIV

BREAST

PART XIV: BREAST

For: Skin grafting techniques *see* Part XII: PLASTIC SURGERY

REMOVAL OF A LUMP FROM THE BREAST

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PRE-OPERATIVE

Indications

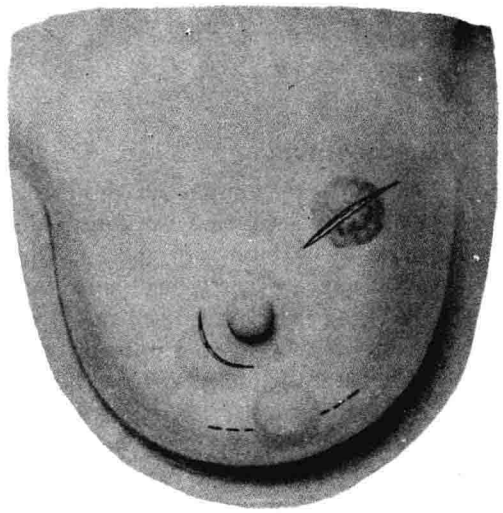
All isolated lumps in the breast should be removed because their nature is doubtful until they have been cut into, inspected, and subjected to microscopic analysis. Some surgeons make an exception in the case of lumps which are unequivocally cysts where aspiration is sometimes employed, but (apart from exceptional circumstances) it is doubtful if this policy is wise. The difficulty is to discriminate between a "lumpiness" which may be left and a lump which must be excised.

THE OPERATION

The incision

1

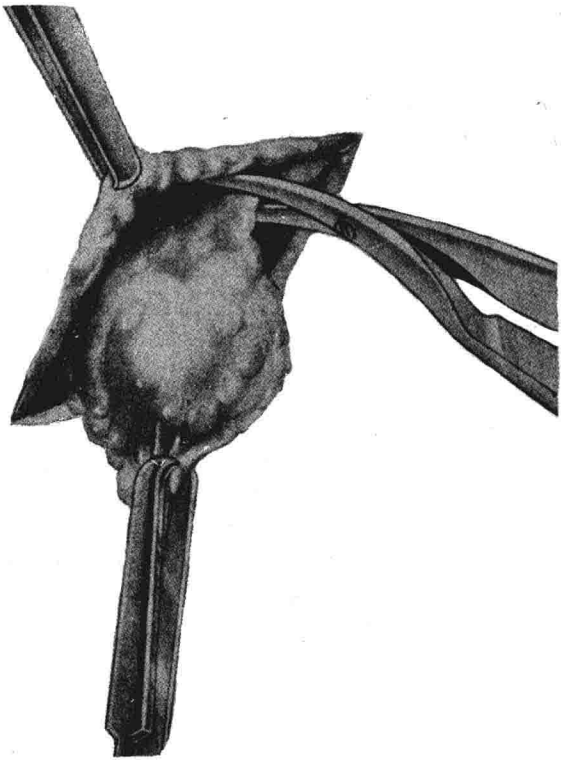
The incision should be placed over the lump and is usually radially disposed to the nipple. Where the lump is near the nipple, an incision following the border of the areola may leave a less noticeable scar, but it is notoriously hard to place this incision exactly and to give it precisely the right curve. Occasionally the incision may be placed in the submammary groove and the lump removed from behind. The length of the incision should be generous and overlie the borders of the lump by at least half an inch.



Securing the lump

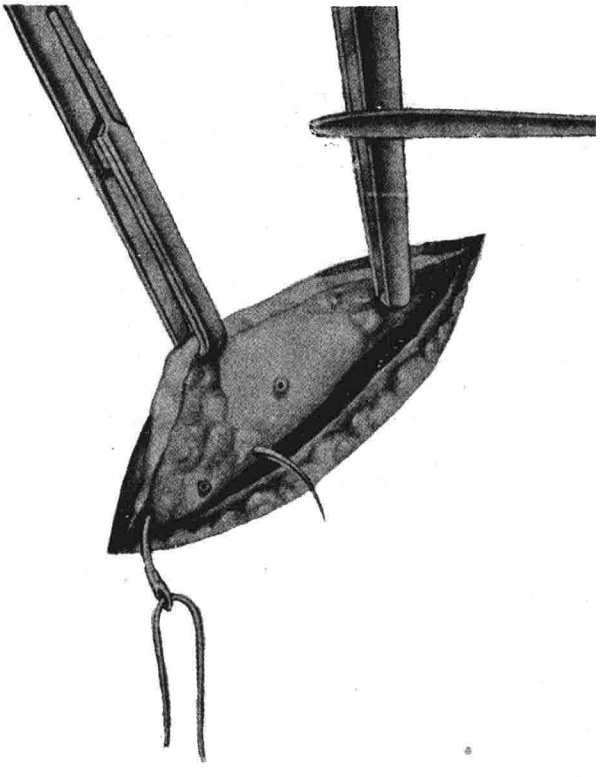
2 The surgeon must determine beforehand how much he is going to remove. Often the lump will be a more advanced expression of disease, such as fibroadenosis, which is implicating the whole breast, and there is a temptation to go on and on removing more and more breast tissue in an endeavour to eradicate the disease. This is not generally possible and is quite unnecessary. In attempting to achieve it the inexperienced surgeon may remove half or even the majority of the breast tissue, heaving it up through his small incision bit by bit and leaving in the end an unsightly deformity with nothing gained.

The lump is isolated and steadied by four fingers of an assistant while the knife is carried down until the pathological tissue can be clearly seen or felt. Breast tissue adjacent to the lump is seized by Allis' forceps and the four-finger pressure is released. By careful and controlled use of the scissors and constant checking with the finger the lump is removed. Using the lump itself as a retractor and before it has become detached, much of the bleeding from the remaining breast tissue can conveniently be brought to the surface and controlled.



Haemostasis

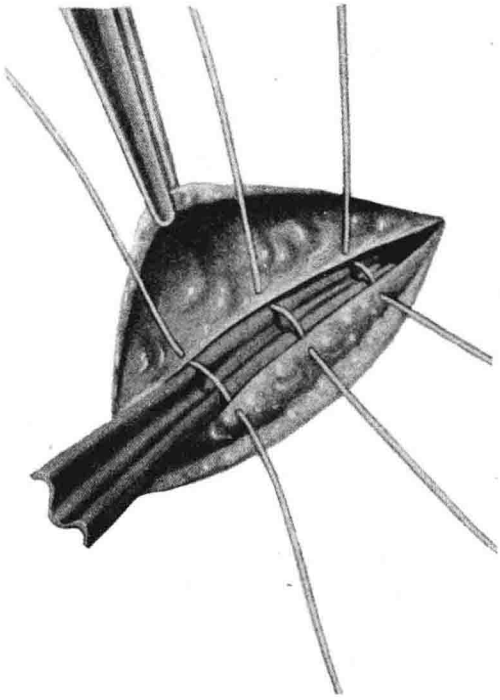
3 As soon as the lump is out, this is cut in many places and examined by sight and touch in order to establish a diagnosis. Whilst this is going on, a gauze sponge is stuffed into the operating field and pressed firmly against the chest wall. At the conclusion of the examination and if the lump proves to be an innocent fibroadenoma or fibroadenosis, the gauze sponge is removed and the breast tissue is seized by Kocher's forceps and brought out into the wound, first on one side and then on the other. Bleeding points are then either treated by diathermy or underrun with catgut threaded on a trocar-pointed needle.



4

Reconstitution of breast tissues

The breast tissue should be sewn together in order to reconstitute the form of the breast as handsomely as possible. In most cases, and certainly in fibroadenosis where the remaining breast tissue is very tough, this should be done with a trocar-pointed needle threaded with catgut. If haemostasis is not satisfactory, a drain is left in deep to the sutures and emerging through the incision itself or through a stab wound in the inframammary groove. Nylon sutures are inserted into the skin.



POST-OPERATIVE CARE

Bandaging

In order to prevent haematoma formation careful bandaging is essential. A plentiful supply of cotton-wool is placed over both breasts and under each armpit. The patient is then gently lifted off the table and the arms held outstretched by assistants. Crêpe bandage is then applied with considerable pressure. If the wound is in the outer half of the breast, the bandage is passed to the sound side; if in the inner half of the breast, towards the side affected. The bandage may be released after 48 hours, by which time it will have worked loose and the drainage tube, if there be one, is due for withdrawal.

[*The illustrations for this Chapter on Removal of a Lump from the Breast were drawn by Miss M. J. Waldron.*]

LOCAL MASTECTOMY

VICTOR RIDDELL, M.A., M.D., F.R.C.S.
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PRE-OPERATIVE

Indications

Local mastectomy is indicated in cases of carcinoma of the breast which are unsuitable for the radical operation; it is preferred as an alternative to the radical procedure by some surgeons, and it can play an important part as a palliative measure in patients with advanced cancer of the breast. It is also probably the treatment of choice for sarcoma of the breast and for the fulminating cancers of pregnancy and lactation. Rarely it may be indicated for widespread cystic disease of the breast, in tuberculous mastitis and such unusual conditions as lymphadenoma and actinomycosis.

Special contra-indications

Local mastectomy is contra-indicated in the treatment of a solitary duct papilloma or solitary simple cyst of the breast.

The extent of local palliative surgery in advanced cancer of the breast is determined by the presence or absence of evidence of dissemination of the malignant process beyond the breast. Broadly speaking, local disease, however advanced, is of better prognosis than disseminated disease, however confined. In the latter instance a purely palliative local mastectomy aiming at relief of symptoms is all that is justified, but if there is no evidence of dissemination outside the breast bold local surgery with, for example, very wide excision of skin or resection of a costal cartilage or rib, may be very rewarding. It follows that deep fixation of the tumour mass to the ribs or intercostal muscles is not an inflexible contra-indication to local surgery, although such a procedure may have to be planned in stages—for example, initial pre-operative irradiation, followed by local mastectomy, followed by resection of the area of the chest wall affected, with plastic reconstruction of the resultant defect.

Pre-operative preparation

Pre-operative irradiation should be considered in a patient with a moist ulcerating carcinoma of the breast. The deep therapy will usually dry and contract the ulcerating area and so render the spread of infection during subsequent mastectomy less likely.

Anaesthesia

General anaesthesia with an endotracheal tube is preferred.

Position of the patient

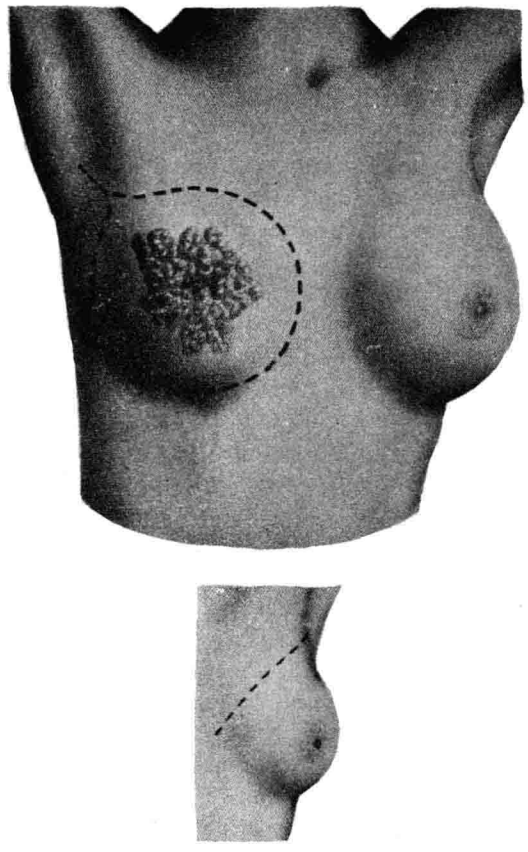
The patient lies prone with the affected breast towelled off. If a skin graft is anticipated the thigh on the side selected to provide the graft should be prepared pre-operatively. The selection, preparation and isolation of the donor area should be carried out before and not after the operation on the breast so that there need be no delay if the need to cut a graft should arise.

THE OPERATION

The incision

1

The long axis of attachment of the breast to the chest wall slopes in an upward and outward direction. The elliptical incisions enclosing the breast should follow this line and should be so placed that they are nowhere less than two inches from the palpable edge of the tumour. In the case of a fungating or ulcerating tumour, or if there is widespread peau d'orange or infiltration of the skin, a very wide area of skin may have to be removed.

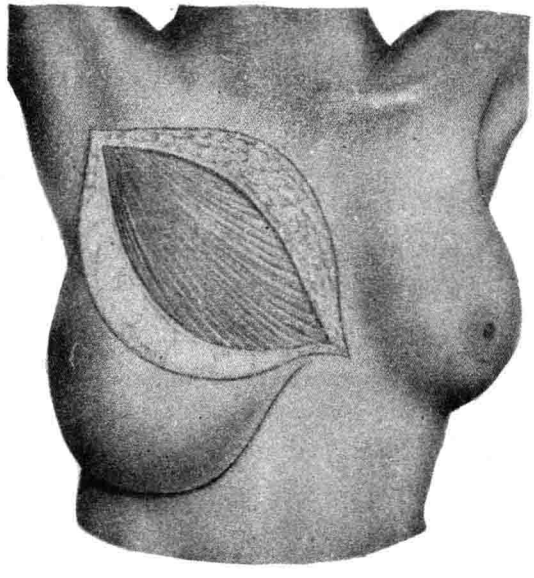


The skin flaps; removal of breast

2

Upper (medial) and lower (lateral) skin flaps are raised sufficiently to allow complete removal of the breast. The axillary tail extension of breast tissue which curls round and under the border of pectoralis major towards the axilla must not be forgotten.

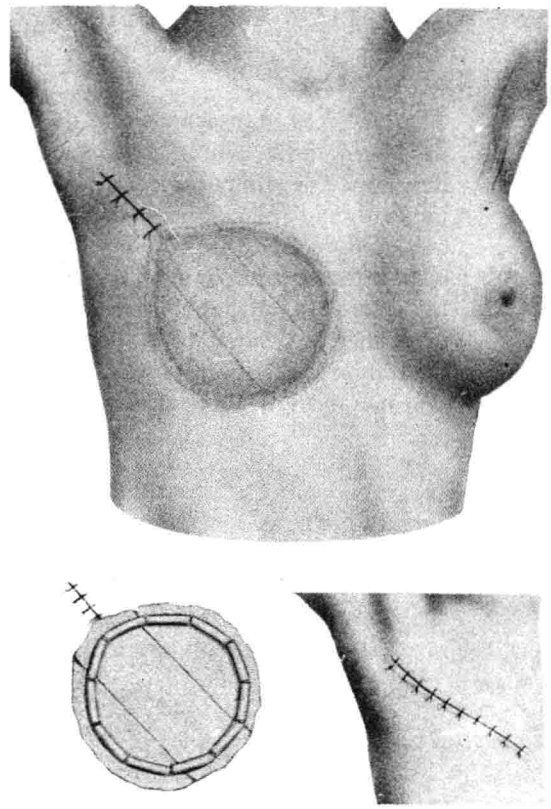
When the limits of the breast have been defined the incision is carried through to the fascia covering the surface of the pectoralis major and the breast is removed with or without the pectoral fascia according to the view held about the part played by this sheet of fascia in the dissemination of cancer. If the fascia is removed with the breast special care must be taken not to injure the underlying muscle fibres or a disabling pectoral fibrosis may develop ost-operatively.



Wound closure

3 If the flaps can be approximated, simple closure with interrupted stitches is all that is required. If approximation is incomplete, the resultant defect will require a dressing of split skin. While it is desirable that the whole of the defect should be covered with skin it is more important to cover the skin edges around the periphery of the recipient area than it is to cover its centre. The skin and subcutaneous tissue at the edge of the excised area form a deep raw shelf and this must everywhere be carefully covered with split skin which should overlap the skin edges and be moulded in position with dental rolls (*see* illustration, bottom left). A central over-all pressure dressing is then applied and fixed in the usual way. If the sides as well as the base of the excised area are not freely overlaid with skin, painful granulating areas will be left which are very slow to heal and which eventually result in a rim of uncomfortable fibrous scar tissue.

Drainage is best effected by stab incision through the lateral (lower) flap. A separate exit for this drain allows the main wound to be sealed off from the drainage opening (*see* illustration, bottom right).



POST-OPERATIVE CARE AND COMPLICATIONS

The wound heals rapidly: alternate stitches should be removed on the fifth day and the remainder on the seventh day after operation. Active movement should be discouraged until the wound is firmly healed.

Serum collection

A collection of serum is not uncommon after a local mastectomy in spite of drainage. It can usually be relieved by passing a sinus forceps through the drainage opening. If it is not accessible in this way it can be aspirated by needle and syringe.

[*The illustrations for this Chapter on Local Mastectomy were drawn by Mr. F. Price.*]

RADICAL MASTECTOMY

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PRE-OPERATIVE

Indications

The operation of radical mastectomy should be limited to those patients with cancer of the breast in whom so far as it is possible to judge clinically the disease is confined to the breast or to the breast and axilla.

Contra-indications

It is most improper to submit a patient to a radical operation for cancer if the disease has already extended beyond the scope and boundaries of the operation. The search for evidence of extension of the disease must be widespread and, apart from a general and abdominal examination, should include radiological examination of the spine and pelvis and of the chest to exclude a silent pleural effusion or symptomless secondary deposit. Evidence of advanced breast disease *contra-indicating* the radical procedure must be sought locally (1) in the *tumour*—skin involvement or peau d'orange wide of the tumour, the presence of skin nodules or fixation to the chest wall; (2) in the nodes—axillary (fixed), supraclavicular or cervical (fixed or mobile); and (3) involvement of the *contralateral* breast, axilla, supraclavicular or cervical areas, and oedema of the arm.

Anaesthesia

General anaesthesia through an endotracheal tube is satisfactory.

Biopsy

In all doubtful cases a biopsy must be performed. Not all adherent lumps are carcinomas and it must constantly be borne in mind that a chronic breast abscess, plasma cell mastitis and traumatic fat necrosis may each be associated with adherence to the overlying skin. It is better to perform a score of biopsies than to remove a single breast unnecessarily.

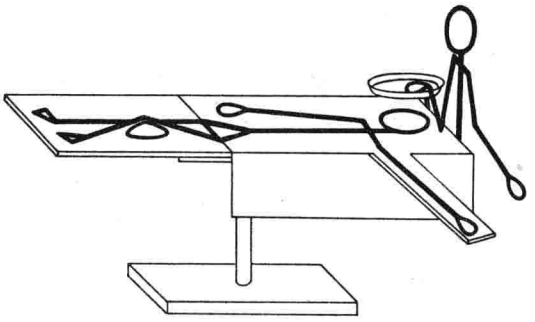
An incision should be made directly over the lump, when it will immediately become apparent whether it is solid or cystic. If the swelling is revealed to be a cyst this should be excised. If solid it is recommended that the incision should be carried through the centre of the swelling, when it will be apparent to an experienced surgeon in approximately eight out of ten cases, on naked eye inspection, whether the lump is definitely malignant or definitely innocent. (If preferred the swelling can be completely excised with diathermy and examined away from the breast.) In the small proportion of cases in which doubt remains after cutting into the lump, two courses are open to the surgeon. He may either hand the specimen over for immediate frozen section or, closing the wound, send it to the laboratory. The frozen section technique is a great convenience because it avoids the anxiety of delay and in all but a few instances it also avoids the need for a second anaesthetic and operation. In the hands of the few it is reliable but it is a matter of experience that it is in just those cases in which the surgeon is still uncertain after cutting into the tumour that the pathologist also has most difficulty in making up his mind. For this reason unless there is available a pathologist who has made a special study of the method it is wiser to allow the extra time necessary for the preparation of a paraffin block, with the advantages in staining and examination which such preparation makes possible.

THE OPERATION

Position of patient

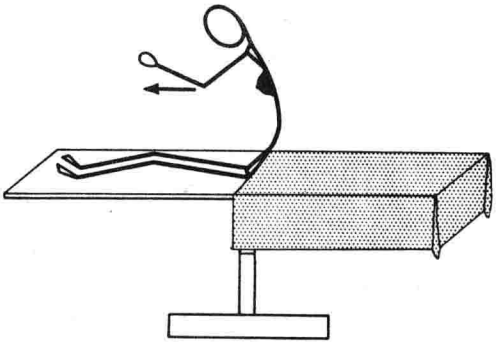
1 The patient lies prone, with arm outstretched upon an arm board to which the wrist is secured by a bandage; the forearm is supinated so that the palm faces the floor.

The nurse taking the case stands at the *head* of the table. From this position she gets an uninterrupted view of the operative field and so can serve the surgeon more effectively.



The towelling

2 Sit the patient up, supporting her from the unaffected side and holding the arm on the affected side in the position shown. Paint the back and flank on the affected side. Lay a mackintosh covered with a sterile towel behind the back as far down as the buttocks. Gently lower the patient back into the horizontal position. This method of towelling is necessary or the posterior part of the flank on the affected side will not remain sterile throughout the operation.



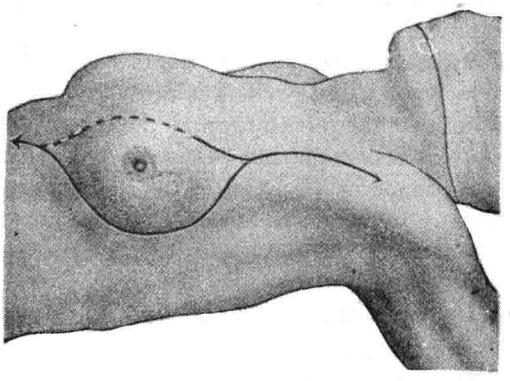
The donor area

In all cases in which there is a *possibility* of a skin graft it is time-saving to prepare and towel the donor area—usually the thigh—before beginning the operation.

The incision

3 An unplanned incision may find the operator unprepared for a skin graft or result in a badly sited scar which restricts post-operative movement. The incisions are planned, not made on the spur of the moment. They should invariably be marked out in indelible ink as the first step of the operation and should be so placed that the growth is in the centre of an elliptical island of skin. The incisions should never be less than 2 inches from the palpable edge of the tumour.

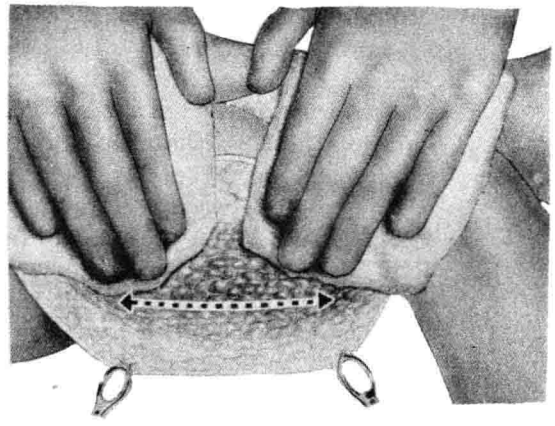
The axillary end of the incision should extend in a straight line to the level of the tip of the coracoid process and should be placed well to the medial side of the anterior axillary fold. It should never be turned down on to the arm over the front of the shoulder. This curved extension is unnecessary and results in a scar which cannot be concealed or disguised.



The lateral flap

The control of bleeding by the "two swab technique"

4 Control of bleeding during elevation of the lateral flap is entirely by swab pressure. Artery forceps applied at this stage hold up the operation, get in the way of dissection, and interrupt the even flow and rhythm of the whole procedure. Standing opposite to the surgeon the assistant works with a swab in each hand. As the elevation of the flap proceeds, so the assistant advances with his swabs, keeping close to the point of the knife as it works its way posteriorly. He stifles all bleeding from the chest wall the instant it arises. With practice and the determination not to use artery forceps, the method will be found to reduce blood loss to an absolute minimum. If an artery forceps has to be made use of, it should be applied only to bleeding vessels on the flap. Bleeding from the breast side can always be controlled by swab pressure.



Correct elevation of the lateral flap

5 The aim is to raise a flap of even thickness. The elevation should be carried back as far as the anterior border of the latissimus dorsi. In skin-short cases the dissection can usefully be continued still farther back superficial to the muscle. This manoeuvre will ease the closure of the wound at the end of the operation (*see also* Illustration 7).