Complications in the Management of Breast Disease

edited by
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Series Foreword

All doctors who are involved in the care of surgical patients are all too aware of the hazards of the operation and the morbidity and mortality that can result from an ill considered or ill managed procedure, and of the complications, whether related directly to the operation, the disease process, the patient or even to the hospital environment. It is also true to say that many hospitals are now mindful of these difficulties and have introduced a pattern of regular medical audit through which the extent and the significance of the problem can be identified and which, when necessary, can point to the remedy.

The majority of complications are of course preventable by careful preoperative preparation, by skilled operative technique and by proper postoperative care, but when they do occur, it is the early recognition, the immediate and correct investigation, and the awareness of the operative treatment that will decide the eventual outcome and the likelihood of early recovery.

Obviously every surgeon would like to believe that in his own practice complications will be, at the least, occasional events and hopefully this is the case in most hospitals. The corollary of this is, however, that the personal experience of many surgeons in these serious potential or actual problems is not great and the opportunities for the trainee surgeon to learn about them, and about their clinical significance and management, are less than adequate.

This deficiency of experience in the average surgeon, whether general surgeon or specialist, has now been appreciated and John Smith in this series of texts has set out to provide what has been termed a 'reference point' from which the surgeon will be able to increase his awareness of the problems and increase his knowledge in areas where he is unlikely to gain experience from clinical practice. The prime aim of the series has been to ensure that knowledge of the existence of complications increases, that prevention can become more widely accepted and that the recognition and management of established complications can be undertaken with skill and competence.

Each of the volumes in the series considers a specific area of surgical practice and, in each, authorities in the field have presented their experience and their views in such a way that it will not only instruct but will also stimulate the reader to study the subject further.

It is undoubtedly an area of surgical practice that is of major importance and which has been somewhat neglected in the past. This is the first time that there has been an attempt to present a comprehensive account covering all aspects of practice and it

will undoubtedly be a significant contribution to patient care in its broadest interpretation.

Sir James Fraser Bt, PPRCS (Ed)
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Editor's Foreword

Most textbooks of surgery acknowledge that postoperative complications exist and some describe methods of prevention or options for their further management. However, it is clear to me from conversations with junior staff, candidates for higher degrees and trainees in all branches of surgery that there is no reference to which they can turn where the complex problem of complications is adequately considered, i.e. covering details of aetiology, predisposition and methods of prevention, together with advice on which complications are likely to be encountered and how they may be recognized, investigated and managed.

This series is directed at all surgical trainees and also at the consultant working outside specialist referral centres. The latter may not often encounter the complications which are under consideration, but when they are encountered the surgeon needs advice on what to do, what not to do and, finally, when specialist referral is indicated.

The authors in this series are all consultants with a specialist practice in teaching hospitals. Each has been asked to provide the necessary information and to be dogmatic where that is possible, but to advise on the options where the situation is less clear.

Each volume is self-sufficient, except that *Complications of Surgery in General* deals with all general surgical complications to avoid detailed repetition in the other, more specialist, volumes. Inevitably there is some overlap between volumes but I feel this to be preferable to omitting topics that may be important. This is the only truly multi-author contribution to the series, resulting from the specialist nature of the complications described.

Finally, not all the complications described have been created by the authors; the selection of topic reflects, rather, their ability to deal with such problems as are referred to them!

The concept of a single volume on *Complications in Surgery* arose from discussions involving, on separate occasions, Mrs Ann Saadi (lately of Baillière Tindall), Mr R. M. Kirk (Royal Free Hospital, London) and myself. The volume has grown into a series but acknowledgements are due to Mrs Saadi and Mr Kirk for the idea and to Mrs Saadi for the enthusiasm which ensured the launch. I am most grateful to Dr Geoffrey Smaldon, lately of Baillière Tindall, who assumed responsibility for the entire series and encouraged or cajoled as necessary. Finally, I am happy to acknowledge the support and encouragement of my wife and family.

John A. R. Smith
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Preface

My initial reaction to being asked to write *'Complications in Surgery—Breast Disease'* was that wound infection was the sole complication of breast surgery. Breast disease does present many difficult problems of *management*. The intention of this book is (i) to identify and discuss specific problems which arise in the management of breast cancer, (ii) to discuss the complications of the treatment of breast cancer, and (iii) to identify problems of benign breast disease. In each section current objectives, results and benefits are stated but the emphasis is on the difficulties that present and on complications that arise.

The book assumes that the bases of breast disease are familiar to the reader. It is aimed at the clinician (consultant) who may be faced with these very problems in individual cases, at clinicians (consultant or research fellow) who are about to study a particular aspect of breast disease and are looking for a starting base for their study, and at trainees in a number of fields (surgery, radiology, oncology, pathology, radiotherapy) who have a general interest in the field of breast disease. Primarily I hope that the book will be used as a reference manual by clinicians who are trying to cope with a particular problem in the management of breast disease.

Although this volume of *Complications in Surgery* is multi-authored, the majority of the authors work or have worked in the Nottingham/Tenovus Breast Project based at Nottingham City Hospital. I have also exercised considerable editorial powers to try to present the book as a view from a single unit and the management plan is based on the considerable experience of the Nottingham City Hospital breast clinics. These clinics encompass patients referred to a single surgeon (RWB) with long-term follow-up. There are in addition two early detection clinics. All histopathological aspects of these cases are studied under the direction of Dr Christopher Elston. One radiotherapist (Dr David Morgan), two radiologists specializing in mammography (Dr Eric Roebuck and Dr Adrian Manhire) and one bone radiologist (Dr Alan Morris) are responsible for care and investigations within their fields. We have for the past 11 years seen around 2000 new patients per year and treated over 150 new breast cancers per year. Steroid receptor assays are carried out at the Tenovus Institute, Cardiff, under the direction of Professor Keith Griffiths and Dr Robert Nicholson. In ten instances I thought our experience of the particular problem insufficient and have asked authors with a particular interest in these situations to contribute chapters.

I am extremely grateful to my co-authors for their excellent

contributions and for allowing me the exercise of editorial red pen. I would particularly like to thank our guest contributors for joining the Nottingham authors. I wish to thank Tenovus for their years of help with breast cancer management and research in Nottingham.

Roger Blamey

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Contents

1 The Diagnosis of Breast Cancer

Christopher Elston and Roger Blamey

The commonest way in which a breast cancer first presents is as a palpable lump in the breast. The other presentations—mammographic abnormality, soreness of the nipple, discharge from the nipple, and metastases in distant sites or in axillary nodes—are much less common. Mammographic abnormalities leading to the diagnosis of cancer are increasing as screening programmes are introduced. Soreness of the nipple due to underlying Paget's disease accounts for only 1% of the breast cancers in the Nottingham–Tenovus series. Discharge from the nipple has led to only five cancers being diagnosed (out of approximately 2500); distant metastasis with a previously unrecognized small palpable primary has been seen only three times as the presenting sign. Metastasis to axillary nodes without palpable lump has accounted for seven presentations.

Breast lump

Unfortunately, in the enthusiasm for newer means of diagnosis, patients complaining of breast lumps are often improperly managed. In the Nottingham Breast Clinic the first decision that the clinician must make is whether a lump is present or not. The decision that a lump is present must be clear and means that the patient is committed to surgery unless the lump proves cystic on needling. In some cases the surgeon is sure that there is no lump; this is an easier decision in the postmenopausal or the teenage breast. In other cases the surgeon feels no definite lump but the breast is generally lumpy and this is frequently so in the women of 35 to 50 years of age. These patients are seen again six weeks later, at a different phase of their menstrual cycle; if the breast is unduly lumpy on that occasion, then the patient is sent for mammography. This raises a further point: if the examiner decides that a lump is present then mammography is not employed at this stage since it contributes nothing further to diagnosis.

These points have been stressed because we feel strongly that they are important principles. Clear thinking and definite decisions must be made and there must be no abdication from clinical decision by substitution of mammography.

Once the decision is made that a lump is present, then the surgeon proceeds on a set path. A 21-gauge needle is advanced

Figure 1.1
Core obtained by Trucut needle.

into the lump and an attempt made to aspirate fluid; if a lump proves to be a cyst and disappears completely on aspiration, then no further action is taken at this time. If the lump is solid the surgeon proceeds to a tissue biopsy employing either a Trucut needle for histology or fine-needle aspiration for cytology.

Trucut needle biopsy

Trucut biopsy is carried out under local anaesthetic (Elston et al, 1978). A small incision is made through the skin with the tip of a sharp scalpel blade, the Trucut needle is pushed through the skin incision, and a biopsy of the lump is taken (Fig. 1.1). Following biopsy the patient is instructed to apply firm pressure for 10 minutes: this prevents bruising. Fortunately, a carcinoma is easier to biopsy than a benign lump. The carcinoma is hard and is cut easily, while benign tissue has the consistency of firm India rubber—fibroadenomas are often too firm to push the needle into at all.

Over an eleven year period over 2000 biopsies have been taken in the referral clinic in Nottingham.

In the cases that ultimately proved to be a carcinoma, Trucut biopsy showed unequivocal cancer in 76% (Table 1.1). A further 5% of biopsies were considered 'suspicious but not diagnostic of cancer'. All such reports have proved subsequently to be from cancer cases.

It has proved possible to make diagnoses other than cancer: fibroadenoma and phyllodes tumour have been correctly diagnosed. These lumps have subsequently been removed.

With the exception of abscess and pregnant tissue (see Chapter 3), a report of benign tissue, or a report of an unsatisfactory core

Table 1.1
Trucut biopsy results from 932 cases subsequently diagnosed to be breast cancer.

Trucut diagnosis	*No.*	%
Carcinoma	704	76
Suspicious	44	5
Benign	180	19
	932	100

for examination, is followed by excision of the lump. Only if there is a strong clinical suspicion of cancer is frozen-section examination of the lump used. A report 'suspicious but not diagnostic of cancer' is likewise usually followed by frozen section after discussion with the patient. A report of invasive carcinoma is followed without further diagnostic procedure by the appropriate treatment. Depending on the line of treatment to be followed, a report of carcinoma without invasive change may be followed by excision of the lump to confirm or deny its in situ nature, before proceeding to definitive treatment.

There has been one false positive diagnosis of carcinoma, amounting to 0.05% of all the carcinomas, in a patient subsequently shown to have a fibroadenoma. This is approximately the rate found with frozen-section examination of a lump.

Fine-needle aspiration cytology (Fig. 1.2)

A preoperative diagnosis can also be achieved using fine-needle aspiration cytology. In the most frequently used method a 21-gauge 40 mm needle is attached to a 10 ml syringe and the needle is passed into the lump in several directions whilst applying suction. Smears are air dried and stained by the May–Grunwald–Giemsa method.

Figure 1.2
Carcinoma cells obtained at fine needle aspiration cytology. May–Grunwald Giemsa ×730.