DR. JEFFERY AND PARTNERS

BREAST UPDATE

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SYMPTOMS, ASSESSMENT AND GUIDELINES FOR REFERRAL

A breast lump and breast pain constitute over 80% of the breast problems that require referral. When a patient presents with a breast problem the basic question for the general practitioner is, "Is there a chance that cancer is present? If not, can I manage these symptoms myself?"

Some patients can be managed, at least initially, by the general practitioner. These include young patients with tender, lumpy breasts and patients with nipple discharge from more than one duct that is not blood stained or troublesome.

ASSESSMENT
Triple assessment represents "best practice" when evaluating a suspicious breast lump. The three components are:

Clinical diagnosis	
Imaging	mammography Ultrasound scan
Pathology	cytology histology

This may seem obvious, but it is frequently not applied.

Clinical diagnosis
Details of risk factors, including family history and current medication are important. There is no justification for a purely clinical diagnosis of breast cancer. The majority presenting with breast cancer complain of a lump. Up to 15% will present with a more diffuse process.

This is particularly common with lobular carcinoma. Clinical assessment may often be inaccurate especially of the axilla where nodal status is wrongly assessed in up to 50% of cases.

The medicolegal consequences of a wrong diagnosis are such that there should be no doubt as to the diagnosis before embarking on treatment.

Mammography (Fig.1)
This should be mandatory even in the presence of an obvious breast lump. It is not only of diagnostic importance, but detects multicentricity and multifocality and provides a baseline for future comparative evaluation. However it is only 85-90 per cent accurate. Because breasts are radiodense in women under 35yrs, ultrasound may be more useful.

Fine needle aspiration biopsy (FNAB)
FNAB allows cytological examination of any lump. A diagnosis of fibroadenoma or "cystic change" without such confirmation is ill advised.
FNAB has the advantage of being an office procedure producing almost immediate results. Needle aspiration can differentiate between solid and cystic lesions. Aspiration of solid lesions has a learning curve and a specialist cytopathologist is required to interpret the smears. In experienced hands the false negative and false positive rates are very low.

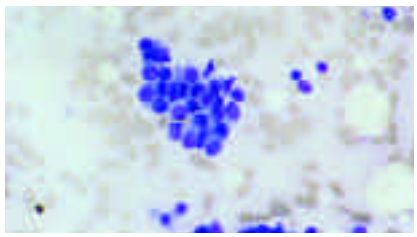
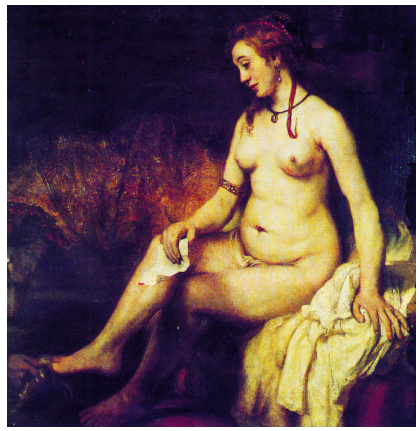


Fig 2 *FNAB cytology showing a cluster of malignant cells*



"Bathsheba bathing" by Rembrandt.
Did she have left breast carcinoma?

Core biopsy
A small core is removed from the mass by means of a cutting needle technique (trucut biopsy).

Needle localisation & biopsy
When a mammographic abnormality is impalpable, a needle wire can be placed under radiological guidance to guide the surgeon. The tissue around the wire hook is excised and submitted for histology.

Open biopsy
Open biopsy should be performed only in patients who have been appropriately investigated by imaging, FNAB cytology and if appropriate, core biopsy.

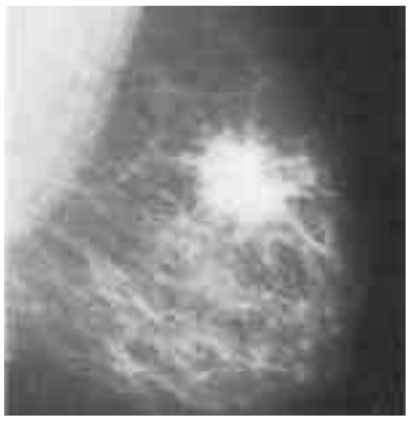


Fig 1 *Mammogram of left breast showing an obvious 3.5 cm spiculated mass typical of breast carcinoma.*

Advantages and disadvantages of techniques for assessment of breast masses

Technique	***Advantages***	***Disadvantages***
Clinical examination	Easy to perform	Low sensitivity in women aged <50
Mammography	Useful for screening of women >50	Requires dedicated equipment and experienced personnel Low sensitivity in women <50 Uncomfortable
Ultrasound	Painless Same sensitivity in all ages Useful in assessing impalpable lumps	Operator dependent Less sensitive and less specific than clinical examination or mammography
FNAB	Cheap High sensitivity Provides definite diagnosis in most instances Low incidence of false positives	Operator dependent Needs experienced cytopathologist Uncomfortable and occasionally painful

TAKE HOME MESSAGE
Triple assessment of a suspicious lesion is essential. This means 3 ..... not 2!

Dr Garron Caine with Dr Eugenio Panieri who was the first receipient of the "Garron Caine Travelling Scholarship" - sponsored by Dr Jeffery and Partners. The scholarship enabled Eugenio to travel to the Netherlands Cancer Institute for a two week stay. During this time he learnt about the sentinel node biopsy technique. The scholarship will be awarded annually to junior surgeons who are in training at Groote Schuur Hospital.

DID YOU KNOW?

Vincent Pallotti Br east Clinic
will open soon.

Mitchells Plain Breast Clinic
Is now fully operational - every Wednesday afternoon.

In our **Kingsbury r ooms** patients with breast problems can be seen at any time.

For more details contact us on
683 3893

Hormone Replacement Therapy & Breast Cancer

Hormone Replacement Therapy- HRT (essentially Estrogen Replacement Therapy) is often prescribed for 3 main reasons.

Short term benefits - relief of perimenopausal symptoms like hot flushes, insomnia, and excessive mood swings

Intermediate benefits - reducing genital tract and generalized skin atrophy

Long term benefits - reduction of cardiovascular disease and osteoporosis.

Other possible benefits include a reduction in the incidence of Alzheimer's Disease and GIT malignancies.

HRT is usually prescribed for the following indications:

- Women undergoing natural menopause.
- Following oophorectomy.
- As therapy for the three (3) categories listed above.

There are a number of HRT preparations available.

The Unopposed HRT (i.e. Estrogen replacement therapy only, such as Premarin and Estroferm).
The combined HRT (i.e. preparations containing both Estrogen and Progesterone, such as Prempak and trisequens).

Women with a uterus need Combined HRT, whereas those post hysterectomy are usually given Unopposed HRT. Depending on the patient profile, HRT may be given orally, by implantation, using skin patches, and topical gels or vaginal applications.

Drawbacks include bleeding with Combined HRT, which is undesirable in older patients. Minor side effects related to the Estrogen and Progesterone also occur.

Breast Cancer is a feared complication of HRT and needs to be put into the correct perspective. Between the ages of 50 and 70 years, 45/1000 women will develop breast cancer. After 5, 10 and 15 years of continuous HRT usage, there is an additional 2, 6, and 12 cases per 1000 women who will develop breast cancer. However, most importantly, women who develop breast cancer on HRT are detected at an earlier stage than those not on HRT.

Women on HRT do more regular Breast Self Examinations (BSE) as well as being examined regularly by doctors. They generally have more screening tests.

Women taking HRT fare much better if they develop breast cancer compared to those not taking HRT. This is probably because the biology and hormone receptor status of these cancers make treatment more effective.
Women on HRT with at least a 5 year usage are unlikely to die from concurrent disease such as heart attacks and orthopedic fractures. The incidence of these diseases is significantly raised in those not on HRT.

Finally, it is the choice of women to embark on HRT after an informed account of benefits and risks. A knowledgeable health care provider should diligently follow up all women on HRT with regular clinical breast examination and mammography.

Tham Matinde (Obstetrics & Gynaecology - University of Cape Town)

SENTINEL NODE BIOPSY: IT'S ROLE IN THE MANAGEMENT OF BREAST CARCINOMA

Standard surgical management of breast cancer comprises resection of the primary tumour (either by wide local excision or mastectomy) and axillary lymph node dissection.

Fig 1. *Lymphoedema following axillary dissection*

Over the last 50 years breast surgery has progressively become more conservative. Surgeons have moved away from radical mastectomy towards more cosmetically acceptable breast conserving operations, usually coupled with axillary lymph node clearance.

The rationale for routine axillary dissection is three fold: tumour staging, local control and improved survival. In the absence of metastatic disease axillary lymph node status remains the most important prognostic factor in patients with breast cancer, determining the need and type of adjuvant treatment required.

In addition axillary dissection is important to local control preventing recurrence which would otherwise occur in approximately 30% of untreated axillae. It is generally accepted that axillary clearance does not affect overall survival. Lymphadenectomy is however complicated by prolonged postoperative wound drainage, seroma formation, lymphoedema of the arm *(Fig.1)* as well as axillary and upper arm paraesthesia.

In a large number of patients with breast cancer, specifically those with small primary tumours, the axillary nodes are uninvolved. These patients undergo a dissection without deriving any therapeutic benefit. The sentinel node biopsy has been developed as a way of accurately identifying the axillary status of the patient thus avoiding a dissection in those who do not have axillary metastases.

WHAT IS A SENTINEL NODE?

The sentinel node is the first lymph node on a direct draining path from the primary tumour site. It is thus the lymph node most likely to harbour metastases. Therefore if a sentinel node is positive for tumour, a complete axillary dissection is carried out. If it is negative, the likelihood of there being further metastases is minimal and the patient is spared further surgery.

HOW IS THE NODE IDENTIFIED?

The technique comprises preoperative identification of the site of the sentinel node by lymphoscintigraphy *(Fig.3)* and intraoperative localisation using a hand held gamma camera. The day prior to surgery the patient undergoes a nuclear medicine scan following tumour injection with a radiolabelled colloid substance. The first site of activity away from the primary tumour injection site is identified as the sentinel node and the position marked on the skin. The following day the patient undergoes surgery. The node is identified by a combination of blue dye and radio-guided surgery using a hand held gama-camera and removed. A frozen section is then performed. If positive the definitive breast surgery is done with an axillary dissection. If negative only the definitive breast surgery is neccessary and many of these patients are able to go home the same day.

DOES IT WORK?

Prospective studies have shown that in early breast cancer a sentinel node can be identified with accuracy in over 90% of cases with an accuracy in predicting axillary status in excess of 95%. However the procedure is technically challenging, and success rates vary according to the surgeon and characteristics of the patient.

A multidisciplinary approach involving surgeon, nuclear medicine physician and pathologist is fundamental to ensure reliable results.

Sentinel node biopsy and selective axillary node clearance is now the standard of care for patients with early breast cancer in many specialist breast cancer institutions. At Groote Schuur Hospital this technique is currently being validated. It is hoped to offer it as an alternative to routine axillary dissection in the near future. A significant number of women with breast cancer will thus be spared unnecessary axillary clearance.

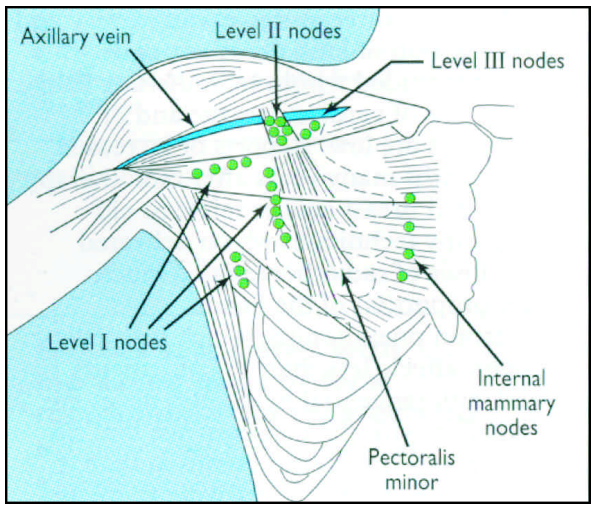


Fig 2. *Levels of axillary nodes*

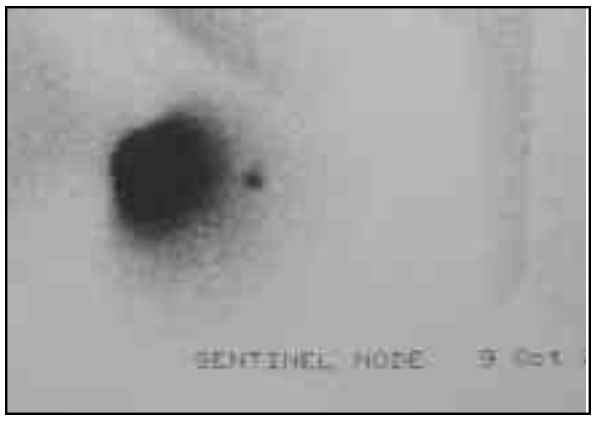


Fig 3. *The sentinel node on lymphoscintigraphy*

Anti-oestrogen Therapy in Breast Cancer: Fareston (Toremifene) - The alternative choice

Toremifene is a chlorinated triphenylethylene that is clinically very similar to Tamoxifen and has potent anti-oestrogen effects. It comes in 60mgs tablets. The peak plasma concentration after oral administration is reached in four hours and elimination half-life is five days as compared to six weeks with Tamoxifen.

In advanced breast cancer, Toremifene has been found to be as effective and at least as well tolerated as Tamoxifen. The same appears to apply in the adjuvant setting.

The risk of endometrial carcinogenic side-effects associated with long term Tamoxifen therapy has been a cause for concern. After a total cumulative clinical exposure to Fareston of approximately 140 000 patient years, only 9 cases of endometrial carcinoma have been reported. The potential risk of developing endometrial cancer in women on adjuvant anti-oestrogen therapy is marginally higher with Tamoxifen therapy. Although Fareston (being a partial agonist) may unmask pre-existing endometrial tumours, there is no clinical data implying that it would per se cause endometrial carcinoma.

Safety results of three randomised trials comparing adjuvant Toremifene and Tamoxifen in postmenopausal patients with node-positive breast cancer showed that the side effect profile of Fareston resembles that of Tamoxifen although there is evidence that Fareston has a better HDL/LDL ratio with potential for cardiovascular risk reduction. A greater sparing effect on bone mineral density has been reported.

The efficacy of Fareston is similar to Tamoxifen. When only patients with oestrogen receptor (ER)-positive cancer were considered, the risk for breast cancer recurrence was lower among the Fareston-treated women. However this was not statistically significant. The trend for fewer breast cancer recurrences in the ER-positive subgroup is encouraging, but a longer follow-up is needed to confirm this. From existing data Fareston could have potentially greater benefits than Tamoxifen in the chemopreventive setting and along with Raloxifene is being tested for this benefit. Raloxifene, although extremely effective against osteoporosis is not as effective as Tamoxifen in the treatment of breast cancer.

Dr Anne Gudgeon - Feb 2001

Refs:
1. Eur J Cancer 2000 Sep;36 Suppl 4:61-2.
Toremifene, where do we stand? Maenpaa J; Holli K
2. Prof T Powles Presentation ECCO 1997

Spontaneous Blood Stained Nipple Discharge

AETIOLOGY

• Intraduct papilloma	commonest cause benign lesion
• Mammary duct ectasia	dilatation with loss of elastin in duct walls second commonest cause
• Cancer	usually papillary carcinoma rarely ductal carcinoma in-situ Pagets disease of nipple
• Others	trauma infection drugs pituitary and other hormonal causes

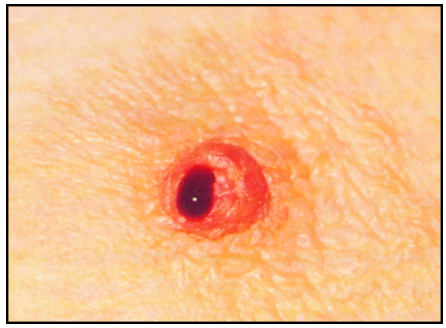
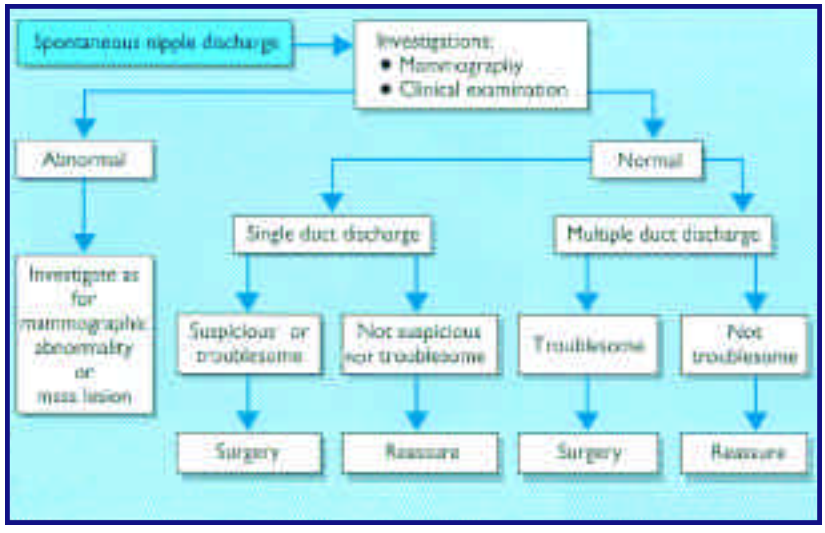


Fig 1
Single duct, bloody nipple discharge.

MANAGEMENT



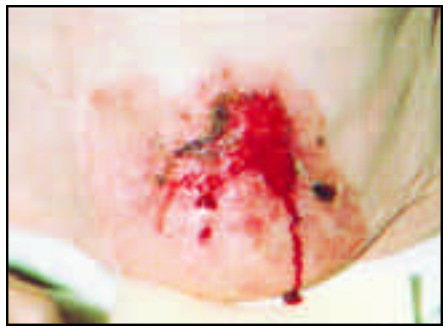


Fig 2
Paget's disease of the nipple

Look for us on the web

Dr. Jeffery and Partners now has it's own website at http://www.surgcare.co.za
This website is currently under construction but when completed will have all the previous editions of Vascular Update, G.I. Update, Surgical Update and Breast Update as well as lots of useful and interesting information on many aspects of our surgical practice. For any comments on Breast Update or any other queries e-mail us at surgeons@surgcare.co.za