

# Targeted Clinical Breast Examinations In Older Women On Acute Medicine Of The Elderly Wards.

O Ogundipe, N Kaur, J Penneycard

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## Abstract

Breast cancer is a significant health problem with considerable morbidity and mortality. It has a high incidence in older women. Most mammography screening programmes apply upper age limits for routine screening protocols. The value and role of clinical breast examination as an additional cancer detection strategy to screening mammography and breast self-examination has been the subject of considerable debate. We prospectively audited the practice of clinical breast examination (CBEs) in acute medicine on the elderly wards of a teaching hospital, to ascertain if five pragmatically pre-defined criteria would increase the yield of obtaining positive results for the detection of clinically significant breast lesions in targeted older women-. The findings of this audit indicate a positive trend towards CBEs done in selected patients who meet certain inclusion criteria, translating into an increased yield of abnormal breast related findings. However, our initial findings note that this possible higher detection rate for abnormal lesions identifies both benign and malignant abnormal breast findings. Further studies are required to determine if, and which particular older patients would benefit most from such targeted examinations.

## INTRODUCTION

Breast cancer represents a significant health problem and accounts for a major proportion of cancers in women.<sup>1,2</sup> The incidence of breast cancer is particularly high in postmenopausal women.<sup>1,2</sup>

Some studies have noted that the practices of breast self-examination (BSE) and clinical breast examination (CBE) have not resulted in a clear reduction in morbidity or mortality from breast cancer.<sup>3,4</sup> BSE and CBE can however translate into the identification of increased numbers of benign breast lesions, an increased number of biopsies being performed, and more psychological distress, physical discomfort or pain.<sup>3,4</sup> The significance of BSE and CBE in the detection of the earlier stages of breast cancer also remains unproven and even disputed.<sup>4</sup>

Mammography has developed over time as a screening option that can potentially facilitate the early detection of breast cancer and thereby save lives.<sup>5</sup> However, mammography also requires informed decision making, as the screening outcomes can generate some false negative and also false positive results. The latter in particular can contribute to overdiagnosis, psychological distress, and possibly lead to further unnecessary investigations and/or treatments.<sup>5</sup>

Despite the aforementioned limitations, both BSE and CBE remain components in many breast cancer detection strategies that are still widely practised. In addition to BSE, and any CBE performed in primary care settings, it might be appropriate for selected / targeted patients presenting to secondary or tertiary care facilities to undergo opportunistic CBE.

## AIMS

Two prospective audits were conducted to assess the role of five pragmatically pre-defined criteria, used as supportive indications for CBEs, in older ( $\geq 65$  years) female inpatients in an acute medicine of the elderly service based in a tertiary hospital.

## METHODS

Setting: A teaching hospital in Scotland, United Kingdom with 104 dedicated acute beds caring for older patients, most of whom are nominally aged  $\geq 65$  years, although the 'needs based' admission system is also accessible to some adults under 65 years. The acute medicine of the elderly service is subdivided into 82 acute medical beds and 22 acute stroke beds.

Methodology: Two prospective audits were performed in the periods June 2009 (Audit 1), and a re-audit between

June/July 2011 (Audit 2). Five pre-defined audit criteria were used to identify cases for inclusion in the audits. The criteria were set pragmatically, and in an attempt to try and improve the positive pick-up rates of CBEs for detecting more clinically significant breast related pathologies. The criteria adopted were:

The audits employed anonymised data collection tools. Medical records of all older female patients aged ≥ 65 years who were admitted to the hospital’s acute medicine of the elderly service during the defined audit periods were reviewed to determine whether or not any of the above five criteria were present. If one or more of the criteria was met, then the medical records were reviewed further to ascertain if they were offered a CBE as part of their ‘usual care’ during that admission period / episode of care.

Audit 1 served as a pilot phase with a more limited range of data collection. The subsequent Audit 2 delved further into the medical records to review the outcomes of any CBEs that had been performed. No interventions were performed on any of the patients in either phase of the audits as this was an observational study. Data from both audits was then collated and analysed accordingly in descriptive format.

RESULTS

In 2009 (Audit 1) and 2011 (Audit 2), thirteen and thirty records of older female inpatients were included in the respective audits based on the above pre-defined criteria. The results are presented in Table 1.

Figure 1

Table 1. Pre-defined audit criteria and clinical breast examinations (CBEs).

	Audit 1	Audit 1	Audit 2	Audit 2
	Audited	CBE done	Audited	CBE done
Criteria	n = 13 pts	n = 6 pts (46%)	n = 30 pts	n = 11 pts (37%)
Past history	3	0 (0%)	8	3 (38%)
Weight loss	0	0 (0%)	5	1 (20%)
Hypercalcaemia	1	1 (100%)	5	2 (40%)
Pathological fractures	2	1 (50%)	8	2 (25%)
Suspected malignancy	7	4 (57%)	18	9 (50%)

Key: Pts = Patients.

In Audit 1, six out of thirteen ‘potential’ patients (46%) had

a CBE. This is in comparison to Audit 2, in which eleven patients out of thirty ‘potential’ patients (37%) had a CBE. It is important to note that in Audit 2, the five patients with hypercalcaemia were also noted to have at least another one of the above pre-set inclusion criteria, and therefore although the number of potential indications for CBE in the examined subgroup was seventeen, this translated to eleven patients.

Although all patients studied were > 65 years, the earlier (pilot) Audit 1 did not collate age range or other comparative data on the subsequent outcomes of the CBEs. In Audit 2, the mean age of the patients included in the study was 84.2 (range 71 – 96 years). Of the eleven CBEs that were performed in Audit 2, results were not retrievable for two patients. Of the remaining nine patients, breast lumps or other lesions were noted in six of the patients (67%), whilst three CBEs were normal (33%). Data from Audit 2 indicated that following some further assessments performed in the specialist breast clinic to which they were referred, two (33.3%) of the six noted breast lumps or lesions were subsequently confirmed to be primary breast cancers on biopsies (1 node negative breast adenocarcinoma and 1 lobular carcinoma), whilst four (66.7%) were identified to be benign breast conditions.

DISCUSSION

Breast cancer is an important clinical condition with attendant morbidity and mortality. Both SBE and CBE have the potential to identify certain breast lesions, but they have engendered considerable debate as they can potentially also generate a need for further investigations and/or treatments, to determine if any lesions found are benign or malignant breast conditions.

This audit in a tertiary hospital setting reviews an added opportunity for the clinical team to assess older women for breast cancer by undertaking targeted CBEs. In this study, the process of performing CBEs was reviewed against five pragmatically pre-defined clinical criteria. The review aimed to evaluate whether or not the pre-defined criteria could serve as relevant clinical parameters to enhance the yield of positive findings from CBEs in favour of more clinically significant lesions. If so, then the utilisation of these criteria, subject to future modifications, refinements and validation studies could potentially serve as a supportive platform for a change in the practice of hospital clinicians towards encouraging the uptake of opportunistic but targeted CBEs in older female inpatients where appropriate.<sup>6,7,8</sup>

The findings of this audit indicate a positive trend towards

CBEs performed in targeted patients who meet certain inclusion criteria, translating into an increased yield of abnormal breast related findings. However, our initial findings at this time note that this possible higher abnormal lesion detection rate still identifies both benign and malignant abnormal breast findings.

Following CBE, onward referral to a specialist breast clinic might be justified in practice, particularly if abnormal findings such as lumps, pain, nipple symptoms, or skin changes are noted in accordance with other reference anchor statements such as those of the Scottish Cancer Group Referral guideline.<sup>8</sup> It is therefore important to have established or readily accessible links with a specialist breast clinic to facilitate the subsequent prompt review, and/or ongoing care of any identified clinical concerns following on from abnormal findings from CBEs.

In this audit, patients were referred to a specialist breast clinic on a rapid access basis for a  $\leq 2$  weeks initial review from a multidisciplinary team. The further assessments that patients subsequently went through in the breast clinic variably included:

In Scotland, United Kingdom where our centre is based, the Scottish Breast Screening Programme (SBSP) currently invites women between the ages of 50 and 70 years for screening mammography every three years. Women aged  $\geq 71$  years are not routinely invited, but are generally encouraged to attend by way of self-referral to their local screening centres.<sup>10</sup>

We noted that many breast lumps/lesions in this study were subsequently proven to be of benign nature, but it is still possible that the patients in question would have had to endure psychological strain/distress as a result of the initial clinical concerns, both prior to and during further specialist assessments.<sup>3,4</sup> We did not measure or quantify any psychological parameters in this study. However, it would seem prudent to suggest that psychological support is an important aspect of any additional CBE screening and assessment protocol although requirements are likely to need individualisation.<sup>1</sup>

The clear limitations of the study are the observational nature, the small numbers, a lack of randomisation, and the adoption of pragmatically pre-defined audit criteria which have not yet been subject to validation. These limitations underline a need for stringent cautions with both the interpretation and extrapolation of the data. Nevertheless,

some informative data on our local clinical practices and outcomes was made available for review.

The results of both audits were presented at our local departmental audit meetings. Based on feedback received from clinical colleagues, we plan to modify the criteria further in future arms of the audit. For example, one relevant suggestion was to modify 'unexplained pathological fracture' to 'unexplained pathological fractures and/or unexplained bone pain.'

## CONCLUSIONS

The detection of breast cancer is an important element in the pathway of care for this important condition. Many current breast screening programmes utilise mammography screening protocols as the preferred option for detecting early breast cancer. However, mammography screening programmes tend to include upper age limits for routine invitations for the procedure, although allowing for self-referral or clinician referral options for those above these 'routine invitation' age limits.

Nevertheless, breast cancer detection is also noted, albeit at later stages than with mammography alone, from other methods like BSE and CBE.<sup>11,12,13,14,15</sup> As women over the age of 70yrs (with reference to the current SBSP 'routine invitation' upper age limit) are still at risk of developing breast cancer, it might be appropriate for some older female patients presenting to secondary or tertiary care facilities to undergo targeted, albeit opportunistic CBEs. However, further studies are required to define if, and which particular older patients would benefit most from such targeted examinations.

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**Author Information**

**OA Ogundipe**

Department of Medicine of the Elderly, Royal Infirmary of Edinburgh

**N Kaur**

Department of Obstetrics & Gynaecology, Royal Infirmary of Edinburgh

**J Penneycard**

Department of Obstetrics & Gynaecology, Royal Infirmary of Edinburgh