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Current Perspective

Follow-up after curative treatment for breast cancer: Why do we still adhere to frequent outpatient clinic visits?

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ABSTRACT

Follow-up after curative treatment for breast cancer consists of frequent outpatient clinic visits, scheduled at regular intervals. Its aim is primarily to detect local disease recurrence, or a second primary breast cancer, but also to provide information and psychosocial support. The cost-effectiveness of these frequent visits is being questioned however, leading to a search for less intensive follow-up strategies, such as follow-up by the general practitioner, patient-initiated or nurse-led follow-up or contact by telephone. These strategies are generally considered to be safe, but they are not yet widely accepted in clinical practice. Since brief interventions based on self-education and information have been shown to be able to improve quality of life, we hypothesise that these interventions may lead to a better acceptance of reduced follow-up by both patients and professionals.

1. Introduction

After curative treatment for breast cancer, women frequently attend scheduled follow-up examinations. The main objective of these examinations is to detect local disease recurrence or a second primary breast cancer in an early stage, hoping that this may increase the chances of cure. Yet, follow-up should also provide information and psychological support. Another aim is to collect data on late effects of surgery, radiotherapy and chemotherapy for audit or research

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and to provide feedback to physicians.[1,2] However, there has been much debate whether these objectives of breast cancer follow-up are adequately met in current clinical practice.[3,4] First, neither the frequency[5,6] nor the intensity[7,8] of follow-up has been shown to influence the chances of cure. Second, there is a general feeling amongst clinicians that there is limited time during the outpatient clinic visit to adequately address often complex psychosocial issues. Indeed, patients often feel uncomfortable with expressing emotional concerns and asking questions.[9] Also, it has been demonstrated that the outpatient clinic visits may induce anxiety because of the risk of detecting tumour relapse.[10] Finally, to provide feedback to the professionals on the effectiveness and side-effects of their treatments, less frequent follow-up may be sufficient as well. Not only do the current frequent follow-up strategies seem to miss their most important goals, but they also depend heavily on expensive and scarce specialised knowledge for routine history taking and physical examinations. Financial constraints force oncologists and policy makers to search for alternative, more cost-effective, follow-up strategies. The aim of this paper is to explore the literature for scientific evidence why physicians and patients should still adhere to frequent outpatient clinic visits after breast cancer treatment, as recommended in the current European and American guidelines for breast cancer follow-up. In addition, we summarise the studies on alternative strategies, focussing on the two main goals of breast cancer follow-up: (1) detecting recurrences or new primaries; and (2) providing psychosocial support to improve quality of life (QoL). Finally, implications for future research are discussed, taking into account the existing knowledge on patients' needs and expectations.

2. Current follow-up strategies and their effectiveness

In Europe, the European Society for Medical Oncology (ESMO) recommends that follow-up of primary breast cancer consists of history taking and physical examinations every 3–6 months in the first 3 years after treatment, every 6–12 months for the next 3 years, and annually thereafter. A mammography is taken every 1–2 years. More intensive surveillance (*i.e.* with additional radiological examinations of liver, lungs and bones and laboratory tests) is not routinely recommended for asymptomatic patients.[11] In a recent update of the follow-up guidelines by the American Society of Clinical Oncology (ASCO), a similar frequency of history taking, physical examination and mammography was proposed. However, there is no high-level evidence supporting these frequent follow-up visits and the current practice of mammography surveillance.[12]

2.1. *Effectiveness of follow-up on detecting recurrent disease*

Intensive surveillance used to be common practice in the seventies and eighties. Large randomised trials by Roselli del Turco and colleagues[8] and the GIVIO investigators[7] have shown that follow-up based on routine outpatient clinic visits combined with an annual mammography is as effective with regard to overall survival, as follow-up with intensive surveillance. Since then, several papers with varying levels of evidence, have been published questioning even the effectiveness of routine outpatient clinic visits.[6,13–15] Wheeler and colleagues performed a longitudinal study of 416 consecutive patients after the diagnosis of primary breast cancer and found that the frequent early follow-up provided no clear clinical gain for the great majority of patients, since early relapse was rare in the first year.[13] Te Boekhorst and colleagues conducted a retrospective review in 270 patients with recurrent breast cancer and also found the clinical impact of the follow-up to be low, as most patients had symptomatic recurrences (63%). When specifically looking at loco regional recurrences, routine follow-up was more effective, detecting 66% of these recurrences. However, early detection did not translate into improved survival.[14]

Stronger evidence is available from a meta-analysis of 12 studies by de Bock and colleagues. This analysis included 5045 breast cancer patients and 378 isolated loco regional recurrences and showed that approximately 40% of recurrences were diagnosed in asymptomatic patients during routine visits or routine tests (95% confidence interval 35% to 45%). Forty-one percent of recurrences were diagnosed outside these routine visits and tests and 18% of recurrences were diagnosed in symptomatic patients at their routine visits. Although the rate of women diagnosed during routine follow-up with an asymptomatic recurrence seems significant, the overall incidence of loco regional recurrence is low. Thus by using frequent routine follow-up in the first two years, much effort is needed to detect only a very small proportion of curable loco regional recurrences early.[15]

A simulation study by Jacobs and colleagues confirmed these findings. They tested various follow-up strategies with regard to the frequency of outpatient clinic visits. It was found that the gain in life expectancy with standard follow-up compared to no follow-up examination at all is only about 2 months in breast cancer patients aged 50 years and treated with curative intent. In older women, the gain was even less.[6]

2.2. *Effectiveness of follow-up in providing psychosocial support*

Providing psychosocial support to improve QoL is another important aim of the follow-up. Breast cancer has an enormous psychological impact on patients and their partners, triggering fears of prolonged suffering, disability and a foreshortened life perspective. High levels of anxiety, depression, and distress are estimated to occur in about 35% of patients after treatment.[16] These patients should be identified and referred for specialised psychosocial support. Others depend on the follow-up visits to the medical specialist for information and some form of psychosocial support. The question remains whether short routine outpatient clinic visits are sufficient and appropriate enough for this type of support. Several studies have indicated that they are not.[9,7] Pennery and colleagues conducted a cross-sectional survey among 24 breast cancer patients of different age and found that most patients felt hurried and uncomfortable with expressing emotional concerns or asking questions during the outpatient clinic visit. Eighteen women stated that they would prefer to receive all or part of their follow-up from a breast care nurse.[9] Allen interviewed six breast cancer patients and found that the