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EDITORIAL



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Should Family Doctors Refer Their Patients For Mammography Screening?

In her research study published on page 315, Dr. Cindy Lam reports that a pilot programme of mammography screening involving patients from a general practice setting in Hong Kong showed that mammography was both technically feasible and acceptable to patients, although there was a low uptake by women offered the chance of screening.

Feasible and acceptable it may be, but is it advisable? Should we persuade our patients to undergo mammography, despite their reluctance?

Family doctors wrestling with this dilemma are likely to receive very conflicting advice. For example, in the B.M.J.¹ a recent review of cancer prevention in primary care concluded that primary care doctors have an important role to play in encouraging women over the age of 50 to attend for breast screening by mammography. This message was reinforced by an advertisement in the *Archives of Family Medicine* which proclaimed October 1995 as National Breast Cancer Awareness Month in the U.S.A., and caught the eye with the dramatic statement that "This year, over 46,000 women will die from breast cancer If (your patient) doesn't make a mammogram appointment, you can't help save her life."

At about the same time, however, the headlines of the leading story in the British Sunday Times read² "Pioneer resigns over 'useless' breast cancer tests", and reported that one of the founders of the U.K.'s national breast screening programme was calling for it to be scrapped on the grounds that mammography was saving too few lives at too high a cost. His concerns were echoed in a paper published in the *Lancet*³, which also argued that the benefits achieved with screening mammography were marginal, and that the costs were unsupportable by public funding.

Mammography has been hailed as an example of a successful mass screening programme, and a variety of countries have set up national screening programmes. Should Hong Kong follow suit?

A central problem seems to be that much of the writing about mammography screening can only be described as wishful thinking and half-truths⁴, encouraged by early trials promising a 30% reduction in mortality and completely ignoring later and more sophisticated trials that have produced much less optimistic results.

This wishful thinking has been reinforced by the tendency of researchers to report the outcome of their trials in relative terms – the relative risk reduction in breast cancer deaths – which is the percentage difference between breast cancer deaths in the study and the control groups. A more practical measure is the *absolute* risk reduction, which reports the number of women who would have to undergo mammography for one death from breast cancer to be prevented.

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Skrabaneck⁵ has calculated the figures for the best known screening trials. In the Health Insurance Plan of New York⁶ trial, for example, a 35% relative risk reduction of dying from breast cancer was obtained, which translates into an absolute risk reduction in breast cancer deaths of 0.02% and means that, if the trial results are correct, then 5061 women would have to be screened to prevent one breast cancer death.

Paradoxically, trials of increasing sophistication have demonstrated not greater benefits as might be expected, but fewer. Thus the U.K. trial⁷ found a relative risk reduction of 14%, which in statistical terms was not significant, but if correct translates into an absolute risk reduction of 0.0006% and means that 18,315 women would have to be screened to prevent a death. The Malmö trial⁸ found a 5% non-significant relative risk reduction, which if correct means that 67,568 women have to be screened to prevent a death.

With so many women needing to be screened, the costs to the health care system are inevitably going to be high. Current estimates³ are that the mean annual cost per life saved approaches \$HK6,696,000.

What is often not taken into account by advocates of screening are the emotional costs to the women involved.

False positive results, as demonstrated in Dr Lam's study, are likely to be common, and lead to further investigation and anxiety. A recent report from Sweden⁹ also documents the substantial costs generated by the further investigation of false positive mammograms. False negatives, as a result of which women may be incorrectly reassured that they do not have cancer, are also of concern, and it is reported that some 10-15%¹⁰ of early breast cancers are missed by mammography.

Finally, even if an early breast cancer is identified, the chance of the patient benefiting from the discovery is only about 1 in 15. The problem is that the sophistication of diagnosis of this particular cancer far exceeds the sophistication of treatment¹¹. Inevitably, this means that the early detection of breast cancer in most women will make no difference to the final outcome. They will, however, know that they have cancer for much longer than they would have done otherwise.

The potential for unsophisticated screening and inadequate treatment of detected cancers is also a problem, and even if the benefits of mammographic screening were proved, care would need to be taken that

the diagnostic facilities provided a high level of technology as well as skilled interpretation of films by experienced radiologists. As well, those providing treatment would need to be aware of the current data regarding trials of surgery, chemotherapy and radiation therapy. Any small benefits of screening could easily be wiped out by the risks of inappropriate forms of intervention.

In Hong Kong, the situation is compounded by the fact that breast cancer still seems to be less common than in other places, despite the rising trend that has been described¹². However, given the relatively low prevalence of this distressing disease, and the continuing debate in countries that have already established expensive national screening programmes, there would seem little justification for a programme of mammographic screening in this community at the present time, although mammography will still be of use in patients with symptoms or signs of breast disease. ■

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