The Women's Health Research Program

Health Bulletin
February 2014

Update from the Bupa Health Foundation Health and Wellbeing After Breast Cancer Study (Bupa study)

The Bupa study is a longitudinal study of Victorian women with their first episode of breast cancer. The aim of the study was to investigate the impact on women of the diagnosis and treatment of breast cancer. Between June 2004 and December 2006 we recruited 1683 Victorian women newly diagnosed with breast cancer, with each participant completing an enrolment questionnaire within 12 months of diagnosis. Women then completed an annual follow-up questionnaire every year for the following five years. Although some participants have dropped out of the study, including some who have passed away, our participants have been extraordinarily committed to the study and 1305 women completed the 5th and final questionnaire, nearly 6 years from their diagnosis. We have reported on a broad range of issues from the study, some of which have been included in previous Health Bulletins from the Women's Health Program. In this Bulletin we are reporting on two issues: persistent pain after treatment for breast cancer and the management of older women with breast cancer.

Persistent pain and wellbeing in women treated for breast cancer[1]

The persistence of pain or other sensations such as numbness and tingling is an issue for some women who have been treated for breast cancer. In the 5th follow-up questionnaire of the Bupa study we asked the participants who had remained free of recurrent or new breast cancer about their recollection of pain in the period following their initial treatment as well as current symptoms.

We found that nearly half of the women recalled that they had pain which lasted for at least 3 months following their initial treatment and of these, 80% reported that their symptoms had persisted for 5 years. Compared with women who did not have persistent pain, the women who described persistent pain were on average younger (by about 2 years), were more likely to have advanced disease at the time of diagnosis and reported their initial pain as more disabling. The persistence of pain was not associated with whether the initial surgery had been a lumpectomy (breast conserving surgery) or a mastectomy, whether the number of lymph nodes removed surgically from the axilla (armpit) was small or large or whether the initial treatment had involved radiotherapy. Having lymphoedema[2] was the single most important physical characteristic associated with persistent pain, however it was clear that there was a lot of individual variation in the pain that women experienced, that many factors contributed to a woman's experience of pain and there remains a lot about persistent pain which is unexplained.

Compared with women who were not experiencing pain after 5 years, women with persistent pain had a lower level of self-reported wellbeing particularly in areas such as anxiety, depression and general health. However we know other non-physical factors contribute to overall wellbeing. For example, compared with breast cancer survivors who live with other people, those who live alone have lower self-reported wellbeing, even when factors such as persistent pain are taken into account.

Overall we found that pain persisting for at least 5 years following treatment for breast cancer is common. The likelihood that a woman will experience persistent pain is not simply explained by the nature of her initial treatment. Where women do report persistent symptoms, referral for management of the pain and any co-existing lymphoedema, is warranted.

The experience of breast cancer in older women[3]

There has been some concern that older women diagnosed with breast cancer may not be treated as aggressively as younger women and that part of the ▸

reason for this may be that they have other medical conditions that affect the treatment of their breast cancer. We used the Bupa Health Foundation Health and Wellbeing After Breast Cancer Study to explore the characteristics and management of women aged 70 years and older at the time of diagnosis (older group) in contrast with women who were younger than 70 years (younger group).

The older women did have more pre-existing health problems than the younger women, particularly conditions such as high blood pressure and symptoms of heart disease (angina).

The older and younger groups were similar in terms of the average size of their breast cancer and the type of surgery performed as part of the initial treatment (most women in both groups had breast conserving surgery). Younger women were more likely to have evidence of spread of the breast cancer to lymph nodes in the axilla (arm pit) and were also more likely to be treated with chemotherapy. Amongst those women whose tumours were hormone receptor positive and therefore suitable for "endocrine therapy" with drugs such as tamoxifen (or in the case of women who are post-menopausal, aromatase inhibitor drugs), older and younger women were equally likely to have been started on such treatment.

Subsequent to their initial treatment, amongst women who had a mastectomy, the older group were less likely to undergo a breast reconstruction than the younger women. Persistence with tamoxifen treatment for 5 years has been shown to reduce the risk of recurrent disease[4] as have the aromatase inhibitor drugs[5]. Although being equally likely to start endocrine therapy, older women were less likely to still be using endocrine therapy after 5 years. Side effects are the most common reason for stopping endocrine therapy[6], so we suspect that older women who develop side effects are less likely to persist with endocrine therapy than younger women.

In terms of wellbeing after 5 years of follow-up, the older women reported less anxiety and a stronger sense of self-control than did the younger group.

Overall, we found that despite older women having more pre-existing health issues at the time of diagnosis than younger women, we did not see evidence of "under-treatment" of their initial disease. However, their subsequent treatment showed that older women were less likely to have reconstructive surgery and to persist with endocrine therapy.

1. *Bell RJ, Robinson PJ, Nazeem F, Panjari M, Fradkin P, Schwarz M, et al. Persistent breast pain 5 years after treatment of invasive breast cancer is largely unexplained by factors associated with treatment. J Cancer Surviv 2013.*
2. *Bell RJ, Robinson PJ, Barallon R, Fradkin P, Schwarz M, Davis SR. Lymphedema: experience of a cohort of women with breast cancer followed for 4 years after diagnosis in Victoria, Australia. Support Care Cancer 2013;21:2017-24.*
3. *Panjari M, Robinson PJ, Davis SR, Schwarz M, Bell RJ. A comparison of the characteristics, treatment and outcome after 5years, of Australian women aged 70+with those aged<70years at the time of diagnosis of breast cancer. J Geriatr Oncol 2014.*
4. *Davies C, Godwin J, Gray R, Clarke M, Cutter D, Darby S, et al. Relevance of breast cancer hormone receptors and other factors to the efficacy of adjuvant tamoxifen: patient-level meta-analysis of randomised trials. Lancet 2011;378:771-84.*
5. *Dowsett M, Cuzick J, Ingle J, Coates A, Forbes J, Bliss J, et al. Meta-analysis of breast cancer outcomes in adjuvant trials of aromatase inhibitors versus tamoxifen. J Clin Oncol 2010;28:509-18.*
6. *Bell RJ, Fradkin P, Schwarz M, Davis SR. Understanding discontinuation of oral adjuvant endocrine therapy by women with hormone receptor-positive invasive breast cancer nearly 4 years from diagnosis. Menopause 2013;20:15-21.*

Get involved in Research

Does anti-androgen therapy impair cognitive function in women with polycystic ovarian syndrome?

There is evidence that testosterone is important for normal brain function in women. If this is the case then blocking testosterone action might impair normal brain function. Women with a condition called polycystic ovarian syndrome (PCOS) tend to have elevated testosterone levels and are commonly treated with a medication (spironolactone) to lower their testosterone and block testosterone action.

The aim of this study is to determine whether spironolactone treatment of women with PCOS results in any change on the brain function assessed by sensitive tests of verbal and spatial learning and memory. The findings will not only inform us about the safety of this treatment in women with PCOS but also add to our understanding of the role of testosterone in brain function in women.

Our approach: PCOS is the most common hormonal disorder in women, affecting around 15% of women of reproductive age. Affected women commonly experience excessive facial and body hair and acne. The standard treatment for this is "anti-androgen" therapy (spironolactone) which blocks testosterone production and action.

We will recruit to this study 2 groups of women with PCOS:

Group 1 will be 25 premenopausal women with PCOS who have been taking the anti-androgen, spironolactone, 100mg daily for at least 3 months. Group 2 will be 25 premenopausal women with PCOS who are to commence spironolactone 100mg daily for excess hair growth/ acne. We will exclude women taking other medications that might confound the study outcome.

We will assess learning and memory using a highly sensitive computer based testing system called CogState that was developed in Australia to assess the cognitive function of healthy people. We have used this in several published studies.

The CogState battery assesses a range of brain functions including word learning and memory, visual attention, psychomotor function, visual learning and executive brain function. The primary study outcome will be the change in the word learning and memory score in group 2, compared to group 1, over 12 weeks. Other outcomes will be the change in the other CogState task score and in testosterone levels.

Anti-androgen therapy is used extensively in women with PCOS. We suspect that this therapy adversely affects verbal learning and memory- to date this has not been studied. This study will enable us to test our hypothesis. If we find that use of the anti-androgen impairs learning and memory, this study will provide information about the size of the effect for us to design a larger double blind, placebo-controlled randomised controlled trial to investigate this further.

This research study will commence shortly, if you are interested in receiving more information regarding this study please contact the Women's Health Research Program.

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