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Editorial Comment

Risk of chemotherapy induced menopause: More detailed data will lead to improved quality of life

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ARTICLE INFO

Article history:
Received 24 May 2007
Accepted 29 May 2007
Available online 26 June 2007

Women now live longer than ever following a diagnosis of breast cancer. Thus, survivorship issues and quality of life following primary treatment of breast cancer are assuming increasing importance. In younger women, the induction of menopause either deliberately[1] or as a side-effect of chemotherapy forms an important piece of the survivorship issue.[2] Paradoxically, induction of menopause following adjuvant chemotherapy while positive in terms of anti-cancer efficacy in some patients[3,4] is nonetheless one of the big negatives in terms of quality of life, especially for the youngest women.[2,5] Menopausal symptoms such as hot flashes, vaginal dryness and 'aches and pains' are clearly relevant but fertility impairment is also important, particularly in the very young women of less than 35 years of age.

Unfortunately, most studies of adjuvant chemotherapy in premenopausal women with breast cancer have either not recorded menstrual status following therapy or have recorded it in an incomplete fashion. Thus, although some papers have reported the incidence of amenorrhoea following chemotherapy, they have not collected sufficient data to report whether amenorrhoea becomes permanent or is only temporary, and if so, for what time periods. Furthermore, there has been little reporting of the subsequent menstrual history of women who become temporarily amenorrhoeic following chemotherapy but resume menses, or of those whose menstrual cycles are apparently unaffected at least immediately following adjuvant chemotherapy. In many instances, investigators have not carefully thought through in advance what data should be collected. Thus, it is only when investigators try to synthesise information to report on these issues or to provide useful advice to young women choosing amongst various possible types of chemotherapy that a lack of complete information and a number of methodologic issues involved with data collection and analysis have been recognised.

As in all areas of oncology treatment, communication is key. Unfortunately, in the absence of robust data concerning induction and permanence of amenorrhoea, degree of fertility impairment and possible therapeutic avenues to preserve fertility, such communication cannot be ideally provided.

Thus, the paper published today in the European Journal of Cancer is a welcome addition to the literature. This paper adds considerably to the body of available data concerning the risk of amenorrhoea following chemotherapy and the associated risk factors. A number of methodologic issues around the measurement of induction of menopause following adjuvant chemotherapy are also raised. This article describes the risk of subsequent premature menopause in women who remain premenopausal following 6–7 cycles of CMF-based chemotherapy and explores associations between premature menopause and other patient factors such as age

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0959-8049/$ - see front matter
doi:10.1016/j.ejca.2007.05.027

and temporary onset of amenorrhoea immediately following chemotherapy. The authors report that older women and those who develop temporary amenorrhoea following chemotherapy are more likely to have entered menopause 5 and 10 years later. These data, while not surprising, will provide an enhanced information source for physicians wishing to counsel young women attempting to make decisions regarding therapy in the adjuvant setting. This paper has also raised methodologic issues concerning data collection in this area. In the IBCSG Trials V and VI, although data regarding amenorrhoea were more carefully collected than in most such trials, data on more than 7% of women were still completely missing and on the remainder even more detailed data concerning menstrual cycles could have been additionally useful. Clearly, the addition of more detailed menstrual histories using tools such as menopause diaries would be extremely helpful in future trials of young women participating in trials of adjuvant systemic therapy.

As more young women live longer following effective chemotherapy for breast cancer, it is imperative that investigators collect more detailed data on this particularly important set of side-effects. It is clear that menopause, with its profound and psychologically important symptoms, including changes in sexuality and fertility, raises issues which deeply affect younger women with this disease. The more accurate the information we can provide regarding these issues, the more able these women will be to choose amongst options that best reflect their personal values and that will most enhance their quality of life. Thus, data such as those published today should provide more detailed information, and improve counselling and communication, thereby leading to an enhanced survivorship experience amongst very young women following adjuvant chemotherapy for breast cancer.

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