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Letter to the Editor

Contralateral prophylactic mastectomy: Warnings for a difficult decision to make with caution!

I read with interest the work of Julian Huang and Anees Chagpar[1] and would like to add some useful information for the surgeons and patients in the decision-making about controlateral prophylactic mastectomy (CPM).

The rationale for CPM in a patient who has had breast cancer is to reduce the risk of contralateral breast cancer (CBC) and possibly improve survival and quality of life. Other reasons for undergoing a CPM include relative ease of follow-up, reduction of anxiety for occurrence of a second breast cancer, and desire for symmetry that can be achieved with bilateral mastectomies and reconstruction.

However regarding the risk of CBC, patients with an unilateral sporadic breast tumor are at a low-modest risk of developing a CBC (estimated to be 0.5 to 1.0%/year cumulative over their lifetime) and most women never will develop it.[2] Instead for patients with breast cancer who carry a BRCA mutation (or others germline genetic mutation conferring a high risk for breast cancer) the risk of a CBC is very high (five-years contralateral breast cancer rates of 10–25%).[2]

As regards the improvement of survival, many retrospective and observational studies have not suggested an overall survival benefit for sporadic breast cancer patients who undergo a CPM.[3–5] Instead evidence suggests that CPM may improve disease-free and overall survival in germline genetic mutation carrier; a retrospective review and matched analysis of 105 women with breast cancer and a deleterious *BRCA* mutation undergoing a CPM had a greater ten-year survival compared with *BRCA* carriers with breast cancer who did not undergo a CPM (89 versus 71%). After adjusting for potential confounders, such as oophorectomy, grade and stage of cancer, and specific gene with the mutation, CPM continued to provide a survival advantage (HR 0.37, 95% CI 0.17–0.80).[6]

As regards quality of life, Julian Huang and Anees Chagpar conclude in their study that “both UM and CPM patients reported high satisfaction with their surgical decisions, despite differing reasons for their respective surgeries” (1).

However, I think that in the discussion on the possibility of carrying out a CPM, it is always necessary to consider a series of issues related to this procedure that may compromise patients quality of life and satisfaction:

- the possible oncological failure because risk-reducing mastectomy does not completely eliminate the risk of developing breast cancer; there is always a residual risk of about 5% to be related to the possible presence of residual glandular tissue or ectopic breast tissue.[2,3]
- the surgical morbidity with overall complication rates of 15–20% such as ischemia of the skin and/or of the areola-nipple complex, haematomas, infections, implant failure, partial/total autologous flap loss; Women with breast cancer undergoing a CPM have nearly a twofold increased risk of complications compared with women undergoing a unilateral mastectomy. Besides in a considerable percentage of cases there is also the need to resort after the prophylactic mastectomy to further aesthetic/plastic procedures to correct some imperfections or repair surgical complications.[2,3,7]
- the presence of sequelae such as the loss of sensitivity of the areola-nipple complex, possible paresthesias, painful sensations and the need for re-adaptation to a different body image.[2,3]

Therefore in consideration of the benefits and the problems that CPM may involve, I think that breast conservation therapy or unilateral therapeutic mastectomy should be considered the first step and an effective local treatment option for patients with unilateral sporadic breast cancer; while CPM should be always offered to patients who carry a germline genetic mutation as “a good choice” to reduce their high risk of a second breast cancer and to improve survival. This choice should be taken, case by case, in specialized breast centers with a dedicated risk team. A personalized multidisciplinary path should guarantee an accurate genetic and clinical counselling, adequate psychological support and detailed information about all alternative risk management strategies. However, the decision to undergo a CPM remains frequently an individual patient's choice based on the management of the presenting breast cancer, the fear of recurrence, the anxieties regarding follow-up imaging and the desire for symmetry.

Compliance with ethical standards

Conflict of interest

All the authors declare no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. The authors declare that they have no conflict of interest.

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