Letter to the Editor

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What The Surgeons Should Know About The Bilateral Prophylactic Mastectomy in BRCA Mutation Carriers

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Dear editor,

I read with interest the work of Ismail Jatoi (1) and would like to add some useful information for the surgeons in the decision-making about bilateral prophylactic mastectomy (BPM).

Bilateral prophylactic mastectomy decreases the incidence of breast cancer by 90 percent or more in patients with BRCA mutation and is able to determine a variable gain in life expectancy compared to radiological surveillance; besides risk-reducing mastectomy allows to contain the strong anxiety and the fear of getting sick that often compromise the quality of life of BRCA mutation carriers (1-3).

On the basis of current evidence, the gold standard seems to be represented by nipple-sparing mastectomy which, thanks to the preservation of the skin envelope and the nipple-areola complex, is able to optimize the oncological and aesthetic results. This procedure is usually performed through an inframammary or radial or axillary incision where the skin is carefully dissected off the breast until all anatomic boundaries of the breast are reached and the gland in its entirety is excised. This technique does not seem to compromise the oncological/preventive efficacy compared to other types of mastectomy. In a multi-institution review of 346 BRCA carriers undergoing either bilateral mastectomy or contralateral mastectomy with nipple-areola sparing there were no cases of breast cancer, whereas, based on models, 22 would have been expected (4). However nipple-sparing mastectomy must be carried out with technical skill and maximum attention not to leave macroscopic residues of mammary gland in particular in the axillary extension, peripheral extremities of the gland and the nipple-areola complex; it is necessary to perform an accurate dissection and a meticulous preparation of the skin flaps and of the areola-nipple complex which must be reasonably thin without however compromising its vitality.

Whenever the patients opt to proceed with BPM, an accurate preoperative radiological study should always be performed with mammography, ultrasound and magnetic resonance imaging to rule out the presence of suspicious breast lesions and minimize the risk of occult carcinomas by definitive histological examination. In the absence of contraindications, all patients should be candidates for breast reconstruction in order to minimize the negative physical and psychological impact of the mastectomy; the breast reconstruction should preferably be immediate, performed at the same time of the prophylactic mastectomy, by a team of dedicated plastic surgeons, or with permanent prosthesis or autologous tissues. Sentinel lymph node biopsy is not recommended (1, 2). However, in the discussion on the possibility of carrying out a BPM, it is always necessary to consider a series of issues related to this procedure:

- 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 (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; 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 (4).

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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 (3).

In addition to these issues, we must add that most of the studies that show a gain in life expectancy thanks to BPM are based only on mathematical models and that the few prospective cohort studies often do not show a statistically significant improvement in terms of survival among women undergoing BPM and intensive radiological surveillance (2).

Therefore, in consideration of the benefits but also of the problems that the BPM involves, all the international guidelines highlight that this procedure must be discussed with healthy BRCA women, without giving an absolute recommendation to perform it (2). This discussion must take place 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. Clinical decision-making about strategies to pursue for breast cancer risk reduction should involve a trade-off between life expectancy and quality of life. However, if the patient and the medical team opt to proceed with BPM, the cumulative evidence to date supports nipple sparing mastectomy with immediate reconstruction as an appropriate risk-reducing procedure to optimize the oncological and aesthetic results and improve quality of life.

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References

1. Jatoi I. Risk-Reducing Options for Women with a Hereditary Breast Cancer Predisposition. Eur J Breast Health 2018; 14: 189-193. (PMID: 30288491) [CrossRef]
2. The National Comprehensive Cancer Network (NCCN) guidelines for detection, prevention, & risk reduction. Breast Cancer Risk Reduction. Available from: URL: http://www.jnccn.org/content/8/10/1112.extract.
3. Alaofi RK, Nassif MO, Al-Hajeili MR. Prophylactic mastectomy for the prevention of breast cancer: Review of the literature. Avicenna J Med 2018; 8: 67-77. (PMID: 30090744) [CrossRef]
4. Jakub JW, Peled AW, Gray RJ, Greenup RA, Kiluk JV, Sacchini V, McLaughlin SA, Tchou JC, Vierkant RA, Degnim AC, Willey S. Oncologic Safety of Prophylactic Nipple-Sparing Mastectomy in a Popula-tion With BRCA Mutations: A Multi-institutional Study. JAMA Surg 2018; 153: 123-129. (PMID: 28903167) [CrossRef]