Controlateral Prophylactic Mastectomies: Correlations between primary tumor and histological findings of controlateral breast

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Background

In Italy in 2015 48,000 new cases of breast carcinomas were diagnosed. Women who are diagnosed with breast cancer have a significant risk of developing contralateral breast cancer during the rest of their lives and this risk is closely associated to the family history, to the onset of breast cancer at a young age and is expressed at about 0.5 to 1% of metachronous tumors per year. The purpose of this work was to evaluate which and how many neoplastic lesions were seen in the contralateral breast that underwent prophylactic mastectomy and to understand what factors predict the appearance of such lesions.

Methods

169 bilateral mastectomies were analyzed in patients with an average age of 47 years, carried out from July 2008 to April 2016, at the Breast Unit of the Sant’Andrea Hospital. We considered women of any age suffering from unilateral breast cancer without either clinical or radiological evidence of a malignant lesion in the contralateral breast and negative for mutations of the BRCA1-BRCA2 genes test.

Of the 169 bilateral mastectomies 35 patients were excluded from the study because they underwent neoadjuvant chemotherapy, another 35 patients because they were suffering from a bilateral neoplasia and 7 cases because they had mutated BRCA1 or BRCA2 genes. Therefore the remaining 92 patients were included in the study.

Results

Both the histological features of the primary tumor and any lesions found in the contralateral prophylactic breast were analyzed. Histological examination of the main breast showed 60 cases of invasive ductal carcinoma (IDC), 17 cases of invasive lobular carcinoma (ILC), 9 cases of in situ ductal carcinoma (ISDC), 3 microinvasive ductal, 1 invasive tubular carcinoma, 1 in situ lobular and 1 widespread in situ. In the contralateral breast, the definitive histological examination revealed that 47 patients had an occult lesion in the prophylactic contralateral breast; in particular 2 cases of LIN 1, 7 cases of LIN2, 6 cases of lobular carcinoma in situ, 26 between DIN1A/DIN1B/DIN1B, 4 cases of carcinoma in situ and 2 cases of invasive ductal carcinoma. In our experience, the data analysis showed that 47 patients had occult lesions in the prophylactic breast.

The correlation obtained from the observation of the main tumor has shown that in a total of 60 invasive ductal carcinoma 32 have a controlateral occult lesion and in a total of 17 cases of invasive lobular carcinoma 9 have an occult lesion in the prophylactic breast. Of these lesions, the multicentric relationship is that 50% of invasive ductal and invasive lobular carcinoma of the main breast have a contralateral lesion.

Conclusion

In conclusion we would like to remind, as demonstrated by our follow-up data and as the literature reiterates, that this surgery does not improve patient survival. Certainly patients with unilateral breast cancer have many surgical therapies to be able to deal with not only having a bilateral mastectomy. The end point of this work is try to understand the risk factors of having a contralateral breast lesion to reduce the probability of a metachronous cancer.

Bilateral Mastectomy with Immediate Reconstruction