EFFECT OF NEOADJUVANT CHEMOTHERAPY ON THE SURGICAL TREATMENT OF PATIENTS WITH LOCALLY ADVANCED BREAST CANCER REQUIRING INITIAL MASTECTOMY

J. Antomarchi1, C. Cavrot1, E. Chamorey2, T. Ihrai1, B. Filpo1, I. Peyrottes3, P. Follana4, C. Chapellier5, J. Ferrero6, E. Barranger1

1Surgical Oncology, Centre Antoine Lacassagne, Nice, FRANCE
2Statistics, Centre Antoine Lacassagne, Nice, FRANCE
3Pathology, Centre Antoine Lacassagne, Nice, FRANCE
4Medical Oncology, Centre Antoine Lacassagne, Nice, FRANCE
5Radiology, Centre Antoine Lacassagne, Nice, FRANCE
6Département d’Oncologie Médicale, Centre Antoine Lacassagne, Nice, FRANCE

Aim: The aim of this study was to determine the rate of breast-conserving surgery (BCS) after neoadjuvant chemotherapy (nCT) in patients initially thought suitable for mastectomy as the only conceivable surgical option.

Methods: This retrospective study was conducted in the Cancer Center Antoine Lacassagne in Nice (France). Between 2007 and 2012, 168 patients received nCT. We selected among those only the ones who received nCT (n = 119) in order to facilitate a conservative treatment’s surgery (a radical treatment was the single option that could be initially proposed to these patients). Patients presenting with metastatic, inflammatory or multifocal tumors or the ones that could already be eligible for a conservative treatment without any nCT were excluded.

Results: Among the 119 patients included, 118 presented an invasive ductal carcinoma, a SBR grade 3 in 54.8% and triple negative breast tumor in 34.4%. The mean tumor size before nCT measured by MRI was 41.6 mm (15-110) and 25.3 mm (0-90) after nCT. Eighty-six of patients (72.3%) underwent a BCS. For 33.6% of these patients, an oncoplastic technique was used. Only 4.3% of the selected patients had to undergo an additional surgery due to insufficient surgical margins during the initial surgery. The median follow-up was 41.1 month (CI95%: 35.2-48.3). Five-years overall survival (OS) and disease-free survival (DFS) were 76% (CI95%: 65-89), 71% (CI95%: 61-82), respectively. The factors significantly affecting the eligibility to BCS were as follows: the MRI tumor’s initial size with 34 mm (range: 15-100) for BCS versus 55 mm (range: 23-110) for mastectomy (p < 0.001), the MRI post-neoadjuvant chemotherapy tumor’s size with 17 mm (range: 0-60) for BCS versus 33 mm (range: 0-90) for mastectomy (p < 0.001), radiological RECIST responses to tumor treatment (p < 0.001). Five-years OS were 77% (CI95%: 63-92) for BCS versus 77% (CI95%: 63-95) for mastectomy (not significant) and 5-years DFS were 74% (CI95%: 64-86) for BCS versus 59% (CI95%: 40-89) for mastectomy (not significant).

Conclusions: nCT for patients with “chemosensitive” breast tumor leads to a significant “mastectomy to BCS” conversion’s rate. The type of surgery does not seem to affect the patient’s OS and DFS. Oncoplastic procedures allow expansion of patient eligibility for BCS after nCT.

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