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476 - ONCOLOGICAL OUTCOME IN PATIENTS SUBMITTED TO NIPPLE-AREOLA COMPLEX SPARING MASTECTOMY AFTER NEOADJUVANT CHEMOTHERAPY

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Introduction: Breast cancer is the most frequent cancer among women in Brazil and worldwide, with the exception of nonmelanoma skin tumors. The nipple-areola complex (NAC)-sparing mastectomy was developed with the aim of improving aesthetic results and psychological impact on patients. The oncological safety of this technique has been well established in early-stage tumors and risk-reducing surgery; however, it is still uncertain in patients undergoing neoadjuvant chemotherapy who are often at a higher risk for relapse. **Objectives:** This study aims to analyze the oncologic outcome in a retrospective cohort of patients that were submitted to mastectomy with preservation of the NAC after neoadjuvant chemotherapy for breast cancer treatment, and to correlate clinicopathological and magnetic resonance (MRI) variables to NAC local relapse. **Methods:** All the patients who were submitted to nipple-sparing mastectomy after neoadjuvant chemotherapy at the Centro de Doenças de Mama de Curitiba, in the period from January 1, 2012, to December 31, 2019, for breast cancer curative treatment were selected. Patients who had incomplete data in their medical records or who were lost to follow-up were excluded. Local and systemic recurrence rates and clinicopathological and MRI variables associated with the oncological outcome were analyzed. To evaluate factors associated with the incidence of recurrence, the Fine and Gray models were adjusted, considering death as a competitive risk. The estimated association measure was the subdistribution hazard ratio (SHR), for which the 95% confidence interval was presented. After adjusting the models, the significance of each variable was analyzed using the Wald test. Values of $p < 0.05$ indicated statistical significance. **Results:** In all, 134 patients were included, with a mean age of 42.3 ± 10.1 (23–68) years in an average follow-up time of 44.5 (4.2–148) months. The locoregional recurrence rate in the sample was 9.7% (13 cases) in a median time of 17.8 (4.5–40) months; in 5 of these 13 cases, the local relapse involved the nipple-areolar complex corresponding to 3.7% of the sample in a median time of 24.2 (11.7–40.1) months. The systemic recurrence rate was 11.9% (16 cases) in a median time of 20.9 (2.7–130) months. There were 12 deaths (9%) in this sample, in a median follow-up time of 37.8 (4.6–98.4) months. Stage 3 tumors ($p = 0.016$, SHR) and Ki67 index ($p = 0.004$) were significantly associated with local and/or systemic recurrence risk. There was found no association between the NAC recurrence and multicentricity/multifocality presentation ($p = 0.716$; SHR 1.39, 95%CI 0.23–8.30), tumor size on prechemotherapy MRI ($p = 0.934$; SHR 1.00, 95%CI 0.96–1.05), or the distance from the tumor to the NAC on pre ($p = 0.866$; SHR 0.99, 95%CI 0.92–1.08) or pos chemotherapy MRI ($p = 0.205$; SHR 1.03, 95%CI 0.98–1.09). Adjuvant radiotherapy was also a nonsignificant factor. When analyzing immunohistochemical parameters, the Ki67 index was the only variable that was correlated ($p = 0.018$; SHR 1.04, 95%CI 1.01–1.08) to the locoregional failure in the NAC. **Conclusion:** Locoregional relapse rate in NAC was within acceptable limits for performing nipple-sparing mastectomy in patients submitted to neoadjuvant chemotherapy in this sample. More studies are needed to confirm the safety of this technique, especially in the stage 3 subgroup of patients.