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Cosmetic perception after breast-conserving surgery and quality of life: is there a correlation?

Idam de Oliveira Junior^{1,2}, Fabíola Cristina Brandini da Silva^{1,2}, Almir José Sarri², René Aloísio da Costa Vieira^{1,3}

¹Barretos Cancer Hospital, Postgraduate Program of Oncology.

²Barretos Cancer Hospital, Nucleus of Mastology.

³Universidade Estadual Paulista "Júlio de Mesquita Filho", Botucatu Medical School, Postgraduate Program of Tocogynecology.

Objective: Breast-conserving surgery (BCS), compared with mastectomy, guarantees equivalent local control and survival, with lower morbidity and higher quality of life (QOL). However, the cosmetic result (CR) of this surgery can be unsatisfactory and influence the survivor's QOL. This issue exacerbates when the patient reports dissatisfaction despite good results determined by healthcare professionals and/or objective methods. Thus, it is necessary to understand the impact of CR on QOL, as well as potential influencing factors. **Methodology:** A cross-sectional, prospective study (ethical approval and FAPESP) was conducted, including patients undergoing BCS. Patients completed the EORTC-C30, QLQ-BR23, and BCTOS questionnaires, performed self-assessment of breast cosmetics, and had photographs taken. The photographs were analyzed using BCCT.core software. For categorical variables, frequencies were calculated, and for numerical variables, mean and standard deviation were determined. The results of BCCT.core were compared with patient self-assessment, analyzing four groups: satisfied, very satisfied, true-dissatisfied, and false-dissatisfied. Kappa was used to assess agreement between categorical variables, and Student t and Mann-Whitney tests were employed to evaluate the relationship between QOL and CR. ANOVA and Bonferroni adjustment was used to compare groups. **Results:** A total of 300 patients were evaluated, 298 completed self-assessment of their breasts (76.8% satisfactory result and 23.2% unsatisfactory) and 297 had BCCT.core evaluation (29.9% satisfactory result and 70.1% unsatisfactory), with a kappa of 0.095 ($p=0.01$). In self-assessment, patients with unsatisfactory CR showed worse QOL scores in 17 items. Under software analysis, this relationship did not have the same proportion, with unsatisfied patients showing worse scores in only four items. In falsely dissatisfied patients (satisfactory result by software and unsatisfactory self-assessment), higher scores of pain and worse functionality were found on the treated side. **Conclusion:** Unsatisfactory CRs were associated with worse QOL scores, a fact that may be linked to other aspects such as breast pain and functionality.

Keywords: breast cancer; breast-conserving surgery; breast cosmesis; quality of life; cosmetic results.