https://doi.org/10.29289/259453942024V34S1007

External prostheses after mastectomy: adhesion, manufacture, and selection of a low-cost functional model to be performed in developing countries

René Aloisio da Costa Vieira[1,2,3,4], Matheus Sampaio Ibrahim[4], Lucas Guimarães de Souza Araujo[4], José de Assis e Souza Junior[3], Luiz Carlos Navarro de Oliveira[3], Carla Simone Moreira de Freitas[3]

[1]Botucatu Faculty of Medicine, Postgraduate Program in Tocogynecology.
[2]Barretos Cancer Hospital, Postgraduate Program in Oncology.
[3]Muriaé Cancer Hospital.
[4]Centro Universitário Faminas, Faculty of Medicine.

Objective: The objective of this study was to create a low-cost external breast prosthesis (BEP) and evaluate factors associated with non-adherence to BEP use. **Methodology:** This study was approved by the Brazilian Ethics Committee CAAE 68799223.2.0000.5105. An observational, prospective transversal study was carried out in a Tertiary Public Oncological Hospital, in previously mastectomized patients, without breast reconstruction, aiming to evaluate factors associated with non-adherence to BEP. In addition to this fact, we create a low-cost PME, lightweight and with low purchase cost. The patients were presented with five prosthesis models, one commercial, three manufactured models, and the new model. They had different weights, covering, and filling materials. The patients chose two prostheses to justify it. In assessing adherence or non-adherence to the use of the prosthesis, the chi-square test and logistic regression were used. **Results:** The silicone prosthesis cost was US$40, with a weight ranging from 123 to 504 g, and the new BEP cost was US$4, with a weight ranging from 19 to 48 g. When asked to select two prosthesis options, it was observed that the first choice was the silicone prosthesis (33.9%), and the second option was the prosthesis made in the study (70.5%). Of the 72 patients evaluated, 45.8% (33) did not use BEP. Excluding patients with a follow-up period of less than 1 month (n=9), failure to use BEP was associated with a lack of knowledge (n=9), and poor adaptation (n=4), with the remainder having no reason (n=8). The following factors of time were evaluated since surgery: age, education, prosthesis size, clinical stage, and BMI; age and BMI were associated with not using BEP. The factors that patients consider most important in a prosthesis were weight (41.7%), shape (29.2%), comfort (15.3%), and ease of cleaning (12.5%). **Conclusion:** There are multiple barriers related to non-adherence to BEP, making it necessary to improve patient knowledge and adherence. The new BEP is lightweight with low-cost production, facilitating its production and patient adherence in low-income countries.

Keywords: breast neoplasms; external breast prosthesis; quality of life.