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Evaluation of lymph nodes in women undergoing neoadjuvant chemotherapy in the treatment of breast cancer

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Objective: To evaluate the impact of neoadjuvant chemotherapy on the surgical management of axillary lymph nodes, focusing on the feasibility of more conservative interventions. **Methods:** This observational, analytical, and cross-sectional study analyzed the medical records of 172 women diagnosed with breast cancer at the Regional Hospital of Asa Norte, between June 2021 and August 2024. Among them, 21 met the inclusion criteria. The study was submitted and approved by the ethics committee (CAAE: 85735824600005553; Opinion: 7429411). **Results:** The mean age of the participants was 52.8 years. Breast involvement was evenly distributed between the right and left sides (47.62% each), while 4.76% had bilateral involvement. The most prevalent molecular subtype was luminal B (33.33%), followed by human epidermal growth factor receptor-type 2-positive (HER2+) (28.57%), triple negative (19.04%), and luminal A (14.28%). The average tumor size was 3.7 cm, being the most common (57.14%), with tumors measuring from 2.1 to 3.0 cm. Axillary staging showed 52.38% with negative nodes and 47.62% with positive nodes. Partial response to chemotherapy was the most frequent outcome (42.86%), while 23.81% achieved pathological complete response and 33.33% showed no response. Surgically, 66.67% underwent mastectomy and 33.33% underwent conservative surgery. Sentinel lymph node biopsy was the predominant axillary approach (57.14%), while 42.86% required lymphadenectomy. Clear margins were observed in 90.48% of cases. The mean number of evaluated lymph nodes was 10.33, with an average of 3.28 positive nodes. **Conclusion:** Neoadjuvant chemotherapy contributed to reducing lymph node involvement, enabling more conservative surgical techniques, such as sentinel lymph node biopsy, with lower morbidity. Therefore, personalized treatment, considering tumor profile and therapeutic response, is essential to improve clinical outcomes and patients' quality of life.

Keywords: breast cancer; neoadjuvant chemotherapy; sentinel lymph node; lymphadenectomy; pathologic complete response.