

Axillary Lymph Node Dissection versus Loco-regional Radiotherapy in Management of the Axilla in Node-Negative Locally Advanced Breast Cancer Post Neoadjuvant Chemotherapy

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Abstract

Background: the evolution of axillary management in breast cancer has witnessed significant changes in recent decades, leading to an overall reduction in surgical interventions. There have been notable shifts in practice, aiming to minimize morbidity while maintaining oncologic outcomes and accurate staging for newly diagnosed breast cancer patients. These advancements have been facilitated by the improved efficacy of adjuvant therapies. *Objective:* To compare the outcomes of axillary lymph node dissection (ALND) and loco-regional axillary radiotherapy (ART) on lymphedema and disease recurrence in locally advanced breast cancer (LABC) cases that have shown a downstaging of their axillary status after neoadjuvant chemotherapy (NACT).

Material and Methods: sixty patients with LABC with an initial cN1-2 disease showed a downstaging of their axillary status to cN0 after NACT. They were randomized into two groups. The first group (the control group) underwent ALND, while the second group (the study group) had a sentinel lymph node biopsy (SLNB) and post-operative ART. Patients with failed SLNB or positive SLNB were excluded. All patients were followed up for loco-regional recurrence and lymphedema for at least one year.

Results: no statistical significance was found between both groups regarding loco-regional recurrence. There was a higher rate of arm lymphedema in the control group. Lymphedema was found in 46.7% of patients who underwent ALND, compared to 13.4% in the study group (patients with SLNB and radiotherapy).

Conclusion: axillary radiation after SNLB has shown no difference regarding axillary recurrence when compared to ALND. However, our results were in favor of radiation concerning lymphedema. With all the ongoing research aiming at reducing axillary surgery, this study could be an initiative for a new strategy in LABC.

Key words: locally advanced breast cancer, axillary lymph node dissection, axillary radiation, lymphedema, neoadjuvant therapy