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ROLL AND SNOLL IN BREAST CARCINOMA PATIENTS AFTER NEOADJUVANT CHEMOTHERAPY (NAC) TREATMENT

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BACKGROUND-AIM

Surgical planning after NAC in breast cancer patients may be difficult as the clinical impact of imaging techniques based on pre-treatment "marker" insertion after a complete treatment response may be cumbersome in helping the surgeon to clearly detect the tumoral bed and perform total excision. The feasibility of ROLL (Radioguided Occult Lesion Localization) and SNOLL (Sentinel Node biopsy and Occult Lesion Localization) techniques in these settings was evaluated.

METHODS

From 2009 to 2014 we studied 21 patients (pts) undergoing breast cancer surgery after NAC. ROLL (5 pts) and SNOLL (16 pts) surgery was performed, after radiopharmaceutical administration (99mTc-albumin macroaggregate for ROLL, 99mTc-albumin nanocolloid for SNOLL). A 1-2 mCi activity was directly injected as close as possible to the pre-treatment "marker" using an ultrasound guide (12 pts) or a stereotactic mammography (9 pts). Scintigraphic images were then acquired in all pts to verify the absence of anomalous activity diffusion and the correct lymph node detection: subdermal periareolar 99mTc-nanocolloids were administrated in SNOLL pts with no lymph node activity (4 pts) after deep interstitial injection.

RESULTS

In all treated pts (21/21), intraoperative detection was successful and allowed a precise tumoral bed excision. Sentinel node biopsy was correctly performed in 14/16 SNOLL pts: no significant lymphatic drainage was observed in 2 pts even after subdermal periareolar administration.

CONCLUSION

ROLL and SNOLL techniques are both feasible in pts undergoing breast cancer surgery after a complete response to the NAC treatment. NAC-induced drainage derangements or secondary lymphatic involvement should be taken in account for those pts with a negative sentinel node identification.