Management:

Axillary Management:

- The optimal treatment of the axilla in the management of breast cancer is under evolution.
- Historically, patients who present with a clinically positive axilla all required axillary lymph node dissection.
- Approximately half of patients who present with axillary primary breast cancer and upfront surgery will have at least 4 positive lymph nodes on final pathology

Neoadjuvant Chemotherapy:

- Current management focuses on administration of neoadjuvant chemotherapy in order to downstage the axilla.

- Multiple recent trials (ACOSOGZ1071 and SENTINA) have demonstrated that in patients with biopsy-proven axillary metastases, neoadjuvant chemotherapy can convert the patient to a clinically negative axilla, and sentinel node biopsy can reliably determine the presence of remaining disease in the axilla

- The feasibility of accurately assessing the presence of residual disease in the axilla:
  - Subset analysis of the ACOSOG 1071:
    - Lower FNR in the identification of the biopsy-proven metastatic lymph
    - confirming this technique as a process to evaluate residual disease in the axilla

Sentinel Lymph Node Biopsy after NACT:

- Finally, the Sentinel Node Biopsy After Neoadjuvant Chemotherapy (SN FNAC) study:
  - Aim: Detecton rate and FNR of sentinel node biopsy
  - Population: 153 patients who presented with biopsy-proved axillary metastases and underwent neoadjuvant chemotherapy who then had a clinical response.
  - Method: all patients had a sentinel node biopsy followed by a completion axillary lymph node dissection.

- This study included 5 patients (3% of total cohort) with occult primary breast cancers.

- *The ability to identify a sentinel node was 87.6% in this study, and when identified, the FNR was 8.4%*

TAD:

- Caudle, et al. described a prospective study in which the biopsy-proven lymph node (clipped node) was specifically targeted for removal in the setting of traditional sentinel node technique. This procedure was also followed by a completion axillary dissection to identify the false negative rate.
  - FNR of 4.2%,
  - while the combination of a sentinel node procedure with clipped node demonstrated an FNR of 1.4%.

- *This study included 1 patient with occult breast cancer*

Clinical management change for the positive axilla:

- Modern, directed systemic therapies can lead to:
  - High rates of complete pathologic response, up to 40%
  - Can spare significant numbers of patients from the morbidity of a full axillary lymph node dissection.

- ***The axillary management strategies discussed above are applicable in the occult breast cancer population, although as a clinical entity it is too rare for dedicated studies.***

NCDB occult breast cancer report:

- Population: Between 2004 and 2014, 684 occult breast cancer patients
- Results:
  - 30% of this cohort underwent neoadjuvant chemotherapy
  - Performance of sentinel node biopsy was not associated with a difference in overall survival.
- it suggests that appropriate selection of patients for neoadjuvant chemotherapy and use of sentinel node biopsy are not associated with worse outcomes.
- The results also suggests that morbidity of ALND can be spared, but locoregional therapy cannot be omitted and regional nodal radiation is necessary.

Advantages of NACT:

- Additional motivation for the use of neoadjuvant chemotherapy in occult primary breast cancer includes:
  - In patients with a pCR:
    - spare of ALND and survival benefit
  - In non pCR patients:
    - Neoadjuvant therapy alone is not associated with improved survival compared to adjuvant therapy
    - However, specifically for triple negative and Her2+ breast cancers, a change in their adjuvant therapy significantly improved disease-free and overall survival

- Patients with ER+/Her2− disease have lower rates of pathologic complete response, but may not benefit from additional cytotoxic therapy

- Even in this context of lower rates of axillary response, however, up to 20% of these patients could be spared the morbidity of axillary therapy, and even without changes to their systemic therapy regimen, the neoadjuvant approach may confer benefit in this population

Management of the Breast

- Historically, mastectomy was performed to both identify the primary tumor and confirm its removal.

- In the MRI era, the rate of identified primary cancer in the breast on final pathology has decreased significantly.

- less than one-third of patients have a primary tumor identified

Whole Breast Radiation:

- No randomized controlled trials
- A recent meta-analysis identified 7 studies that compared surgery to conservative management, defined as observation or radiation therapy :
- All of these patients underwent ALND.
  - For those undergoing mastectomy, a primary tumor was identified only 20% of the time on final pathology.
  - It demonstrated no difference in mortality, locoregional recurrence, or distant metastases in patients undergoing mastectomy versus whole breast radiation

Other studies:

- Two recent NCDB studies (1853 patients) suggested that:
  - The use of contemporary management strategies, including neoadjuvant chemotherapy and regional radiation therapy, is associated with improved outcomes.

Conclusion:

- Axillary primary breast cancer is a rare clinical entity, representing less than 1% of all new breast cancer cases.
- Although prospective data is limited, the comprehensive weight of the literature suggests that the behavior of axillary primary breast cancer is similar to that of other anatomic stage II breast cancers.
- Use of MRI has aided in finding target primary lesions to facilitate diagnosis and management and to select patients who can avoid mastectomy and receive whole breast radiation

- Recent management changes in the approach to the axilla can be applied to occult primary breast cancer, which emphasizes a neoadjuvant chemotherapy approach.

- There are reports indicating the equivalence of mastectomy versus whole breast radiation in management of the breast.

- With appropriate diagnostic work up and staging, even this rare entity should expect similar outcomes to other stage matched breast cancers.

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Thank you