

Axillary Node Recurrence

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Relevance

In an attempt to minimize long term complications and to maximize cancer control, the management of the axilla has undergone significant changes in the last 5 years.

Two trends have emerged:

1. The omission of ALND has been advocated in patients with an extremely low risk of axillary disease i.e. T1a tumours
2. Sentinel node mapping has been advocated as the standard of care for women without Level I evidence



Purpose

- To evaluate these trends with respect to Axillary Node Recurrence



Case Presentation: Is axillary staging required?

- 80 year with A.Fib, Mild Angina, NIDDM, ASA III
- Mammographically detected breast cancer 10 x 8 x 11 mm
- Core Biopsy: Invasive Grade I, ER positive tumour with no lymphovascular invasion
- On examination: it was nonpalpable without clinical node involvement



Case Presentation

Would you offer ALND??

Case Presentation

- What is the anticipated rate of node involvement in the axilla?
 1. < 5%
 2. 5 – 10%
 3. 10 – 30%
 4. >30%

Case Presentation

Would you offer Sentinel Node Mapping?

Would results of the node biopsy influence management?

Case Presentation

- What is the anticipated False negative rate for SLNM?
 1. <2%
 2. 2 – 5%
 3. 5 – 10%
 4. >10%

Outcome

- She was presented to the Breast Tumour Group and elected to undergo lumpectomy, radiation including lower axillary nodes and oral Tamoxifen
- Formal node sampling/dissection was omitted
- Unfortunately....

Lymphedema



Elimination of Node Dissection

The Fisherian Concept:

Based on NSABP Trials of the 1970's - 1980's, Bernard Fisher put forth the concept that ALND did not impact survival and node involvement was only a marker for systemic disease. Therefore it is logical to omit Axillary staging to reduce the morbidity of care.

But...

The effect of ALND on Survival from Early Breast Cancer

- [Bland et al.](#): Retrospective review of SEER database including 547,847 women treated in the USA for Stage I/II CA from 1985 - 1995. Women undergoing BCS were reviewed, 71,227.
- 10 year survival of women with Stage I breast cancer treated with BCS and ALND was 85% vs 66% in whom ALND was eliminated
 - When XRT was added to the axilla, the survival was 94% in women who had ALND and 85% when the ALND was eliminated
 - In women who had XRT and chemotherapy, the survival was 86% with ALND and 58% without

Survival Advantage Related to ALND

- Related to three factors:
 - Staging
 - Selection of patients for Chemo/Radiation Therapy
 - Prevention of Axillary Recurrence

Axillary Recurrence

In the two largest studies on the topic:

1. Relatively rare occurring in 1 – 3% of women with EBC
2. Of patients who present with an axillary recurrence, about half will have systemic disease as well
3. Harris et al reported a median time of recurrence of 41 months
4. Axillary only “operable” recurrences appeared later and McCready’s paper a median time of 8.5 years

(Harris et al, McCready et al):

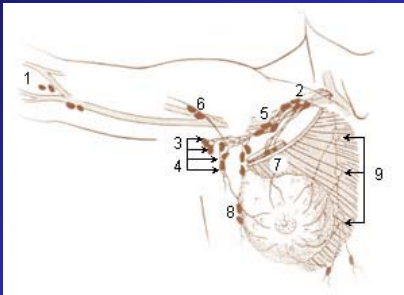
Outcome of Axillary Recurrence

- Localized operable axillary recurrence has a ten year survival reported as 44% by Harris and 56% by McCready
 - Survival is less than that of Stage II breast cancer
- Axillary recurrence associated with systemic failure is not curable
 - The issue is if the residual disease in the axilla is a source of systemic metastasis

Prevention of Axillary node recurrence

- Technical factors
 - Sentinel node mapping
 - Axillary Node dissection
- Addition of Radiation in high risk patients
 - Extracapsular invasion, More than 4 positive nodes, large nodes > 4 cm, apical nodes
 - Role in other situation should be subject to prospective trials

Axillary Node Drainage Patterns



Personal Experience

- N = 10 patients over 15 years,
 - 2 patient's failed in Rotter's nodes
 - 3 patients have failed in low pectoral nodes
 - 1 patient failed following SLNM with blue dye (no uptake of radiolabel led colloid)
 - 2 patients were non operable at presentation (1 85 yr in whom ALND was omitted, 1 DCIS)
 - 2 patients had contra lateral nodes without evidence of a contra lateral breast primary

Sentinel Node Mapping

- In the era of stand alone Sentinel Node Dissection, the relevance of nodal recurrence may be more significant to overall outcome of women
- There is an anticipated 5 - 10% false negative rate associated with SND resulting in under staging and therefore under treating some women with breast cancer.
- We need to have standards to monitor what is the outcome in patients who have stand alone SLND.

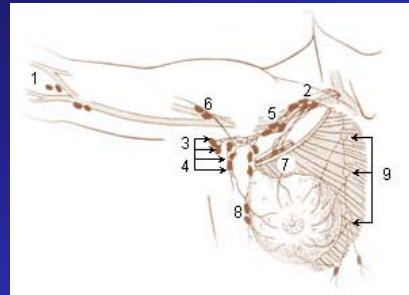
Clinical False Negative Rate

- Number of patients who have a negative SLND and develop a recurrence in the axilla

Clinical False Negative Rate

- Studies show very low rates of clinical axillary recurrence following a negative sentinel node biopsy.
- On average the clinical false negative rate is <1%.
- Follow up is short, about 30 months
 - Van der Veegt et al reported a 1% recurrence
n=106 node negative patients
 - MSKCC: Neg SLN n=2340 Recurrence .18%
Pos SLN n=210 Recurrence 1.4%

Axillary Node Drainage Patterns



Conclusions

- Axillary Node Failure is a relatively rare occurrence, estimated at a rate of 1 - 3% occurring between 4 - 8 years after initial management.
- With complete staging, about 50% will have distant disease.
- Surgery is an option following restaging
- The prognosis even with multi-modality care is poor with <50% ten year survival

Conclusions

- When undertaking stand alone SLND, a clinical false negative rate of <1- 3% should be achieved
- The impact of incomplete axillary clearance in SLN negative patients is less than 1%, however because axillary recurrences are detected late (greater than 4 yrs), this rate may increase over time.

Conclusions

- Addition of XRT to axillary nodes reduces local recurrences but is associated with a relatively high rate of lymphedema if the nodes have already been dissected
- Should be limited to clinical trials if high risk features for recurrence are not present.