

Isolated Late Chest Wall Recurrence after Mastectomy for Breast Cancer

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SUMMARY

An isolated late chest wall recurrence after mastectomy for breast cancer is rare. We present a case of a lady with a T2N1M0 right breast cancer who developed an isolated local recurrence on the chest wall 11 years after mastectomy. Staging investigations excluded distant metastases. She underwent an excisional biopsy and was started on an aromatase inhibitor. Radiotherapy was given to the chest wall followed by a boost to the site of excision. Although most chest wall recurrences fare poorly, a favourable subgroup can be identified and should be treated aggressively in a multidisciplinary approach.

KEY WORDS:

Chest wall recurrence, Breast cancer, Mastectomy, Radiotherapy

INTRODUCTION

Even after a modified radical mastectomy and axillary node clearance for breast cancer, loco-regional recurrences may occur in 20-40% of patients especially if chest wall radiotherapy is not given. Most loco-regional recurrences occur in the chest wall and usually within 5 years of surgery. As the majority of chest wall recurrences are associated with distant metastases, an isolated late chest wall recurrence is rare. Presented here is a patient with an isolated chest wall recurrence eleven years after mastectomy.

CASE REPORT

Mrs T, a 73 year old lady, presented in late February 1998 with a carcinoma of the right breast. She underwent a modified radical mastectomy and axillary node dissection at a private hospital in Kuala Lumpur the following month. Histopathological examination of the specimen revealed a 5 cm, grade 2, ER/PR positive, invasive ductal adenocarcinoma with clear surgical margins and 3 of 12 axillary lymph nodes positive for malignancy. She was referred to the Oncology Department at UKM Medical Centre in April 1998 and started on Tamoxifen 20mg a day. Chemotherapy and radiotherapy were not given and she remained under six monthly review. After completion of five years of Tamoxifen in April 2003, she continued under annual review.

In May 2009, a 5 mm subcutaneous nodule was found at the centre of the right chest wall mastectomy scar. She was referred to the Breast Surgical team and a fine needle

aspiration was attempted but failed to obtain an adequate sample for cytology. She declined an excision biopsy and remained under 3 monthly follow-up. The nodule remained unchanged till June 2010 when she voiced concern that the nodule had increased in size. Physical examination confirmed a 1 cm well defined subcutaneous nodule at the same site without palpable supraclavicular or axillary lymphadenopathy. A computed tomography scan of the chest and abdomen was done and noted a 1.7 cm nodule at the right anterior chest wall without regional or distant metastases (see Figure 1). A wide local excision was performed in June 2010 and pathological examination confirmed a 15 mm grade 1 invasive ductal carcinoma, ER/PR positive HER2 negative, infiltrating the underlying skeletal muscle with ductal carcinoma in situ in a cribriform pattern seen in adjacent areas. The deep, base and medial surgical margins were positive for malignancy. An isotope bone scan was also performed and was negative. She declined further surgery.

She was started on letrozole 2.5 mg a day and radiotherapy to the chest wall (40Gy in 15 fractions) was given with a 9 MeV electron boost (10 Gy in 5 fractions) to the site of excision. She remains under close active surveillance with no evidence of local or distant recurrence.

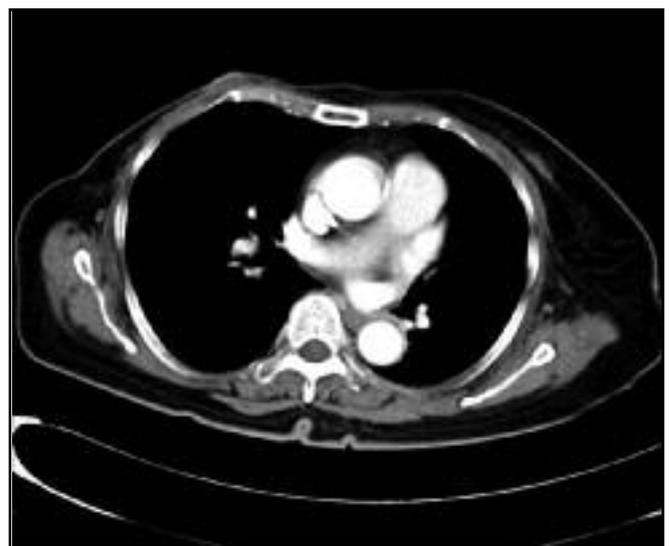


Fig. 1: Computed tomography of the chest showing a small nodule on the right chest wall.

This article was accepted: 21 June 2011

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DISCUSSION

A review of 5 NSABP randomized controlled trials involving more than 5000 women with node positive breast cancer who had mastectomy and adjuvant chemotherapy with or without tamoxifen and without radiotherapy found a 10 year cumulative incidence of isolated loco-regional failure of 12.2%¹. The majority (56.9%) of loco-regional recurrences (LRR) occurred in the chest wall and around the mastectomy scar whereas supraclavicular and axillary recurrences comprised 22.6% and 11.7% of such recurrences respectively. In addition, most loco-regional recurrences (92.4%) occurred in the first 8 years.

Late chest wall relapses appear to have a better prognosis than early chest wall relapses. A study by Moran et al compared outcomes between 213 patients with a LRR as site of first relapse according to breast or chest wall and early or late relapse (less or more than 5 years from initial diagnosis). Following LRR, the 5 year overall survival and distant metastasis free survival were 70% and 65% for late chest wall relapse compared to 47% and 42% for early chest wall relapse².

Patients with an isolated chest wall recurrence should be treated appropriately to improve outcomes. Patients who had an excisional biopsy of the recurrence had a better 5-year survival (50%) compared to those who only had an incisional biopsy (21%). However as excision alone results in failure rates of 57-76%, adjuvant radiotherapy is frequently indicated. The extent of radiation fields showed a significant influence on post-recurrence survival. Treatment with small fields showed a 5 year survival rate of 31% as opposed to 47% with radiation fields covering the total recurrence site, $p < 0.05$ ³. Furthermore, multivariate analysis confirmed local control as the most important treatment factor irrespective of the treatment modality.

A favourable subgroup of patients with chest wall recurrence after mastectomy can be identified. Patients with a disease-free interval after mastectomy of 2 years or more, an isolated

chest wall recurrence and tumour size < 3 cm or complete excision of recurrent disease had a 10 year actuarial cause specific survival and local control of 77% and 86%, respectively, after chest wall radiotherapy to a median dose of 60 Gy (2 Gy/fraction)⁴. Adjuvant tamoxifen after an isolated locoregional recurrence has been shown to improve 5 year disease free survival, from 36% to 56%, after radiotherapy though there was no significant difference in overall survival⁵. The role of chemotherapy in this situation is unclear with no clinical trials to guide treatment decisions though it would be reasonable to offer chemotherapy in those with an early chest wall relapse due to a high risk of occult distant metastases.

In conclusion, although an isolated late chest wall recurrence after mastectomy is rare, continued vigilance is important especially for those patients who did not have post-mastectomy radiotherapy. A favourable subgroup can be identified and should be managed aggressively so as to improve the opportunity for cure.

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