Thoracoscopic Internal Mammary Lymphadenectomy in Breast Cancer, Technique and Indications

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Abstract

The aim of our study was to investigate the feasibility and safety of thoracoscopic internal mammary lymphadenectomy as a method to refine and thereby improve nodal staging in breast cancer. **Methods:** During the period from June 2004 to May 2007, 50 patients with operable breast cancer underwent modified radical mastectomy (MRM) or breast conserving surgery (BCS), followed by thoracoscopic internal mammary lymphadenectomy, using 3 ports through the skin incision of the MRM or the BCS. Metal clips were used to mark precise site of lymphadenectomy. **Results:** Of total number of 50 patients, the mean age of patients was 44 years (range, 27–60 years). 40 (80%) had medio-central tumor, 10 (20%) had lateral tumor. 35 (70%) had clinically involved axillary nodes. 16 out of 50 patients received neo-adjuvant chemotherapy. 44 patients underwent MRM and 6 patients underwent BCS. No intra-operative complications occurred. Atelectasis was the only postoperative complication that was encountered, which occurred in 12 cases, and was treated conservatively. The average chest drainage period was 1.2 day (range, 1–2 days). The total number of IMN metastasis was 18 patients (36%). The risk of IMN metastasis was higher; in younger patients (P = 0.03), in medio-central tumors (P = 0.03), in bigger tumors (P = 0.05), and with heavier metastasis of axillary LNs (P = 0.001). But a correlation with the histological pattern of the 1ry tumor didn't exist (P = 1). Knowing the IMN status helped in proper staging of patients, 7 patients showed evident stage migration after adding the IMN analysis to that of primary tumor and axillary LN. During the follow up period (the median, 22 months; range, 7 to 42months),no patient had pleural dissemination or port-site metastasis.
Conclusion: Thoracoscopic IMN lymphadenectomy is a safe procedure, which can be done without serious additional complications or cosmetic compromise. And allow proper nodal staging, which allow proper treatment planning by:
•Selecting those patients (64%) who could safely avoid IMN radiotherapy and its morbidity should the IMN be histopathologically negative.
•Providing not only a solid indication of IMN radiotherapy (36 % of patients) should the IMN be histopathologically positive but also aided in precise guidance of radiation along metal endoclips which were used to mark the exact site of lymphadenectomy, aiming at minimizing cardiac dose.
•Identifying those patients who could receive more appropriate adjuvant chemotherapy regimens (36% of all study patients) or safely avoid them.

***Keywords*:** Thoracoscopic; Internal, mammary; Lymphadenectomy; Thoracic; Stage.