

AB017. OS04.03. Impact of lymph node dissection for thymic malignancies: multi-institutional propensity score matched analysis

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Background: Surgical resection is the best treatment in thymic malignancies; however, the prognostic significance of nodal metastases is unclear and guidelines regarding lymph node dissection (LND) have not been suggested. The aim of this study is to analyze the prognostic implications of nodal metastases and role of LND in thymic malignancies.

Methods: Between January 2000 and December 2013, 1,597 patients who underwent thymectomy due to thymic malignancy from multi-center database were retrospectively analyzed. Intentional LND was performed in 443 patients

(27.7%). The patients were divided into LND+ and LND- group in thymoma and thymic carcinoma. Preoperative clinical parameter including age, gender, comorbidity, symptom, myasthenia gravis (MG), performance status, tumor size, clinical Masaoka-Koaga stage, and lymphadenopathy in preoperative staging were used for propensity score matching. After propensity score matching, LND+ and LND- groups were matched in 580 patients in thymoma and 174 patients in thymic carcinoma, respectively.

Results: Lymph Node metastasis was identified in 13 patients with thymoma (6.7%) and 47 patients with thymic carcinoma (32.7%). In multivariable analysis, thymic carcinoma (HR 19.2, $P < 0.001$), the subtype of thymoma (A/AB/B1 *vs.* B2/B3, HR 4.6, $P = 0.02$), and tumor size (HR 1.1, $P = 0.02$) were significant predictive factors for nodal metastasis. In 10-year freedom from recurrence (FFR) rate, the pN1 and pN2 was significantly worse than that of the pN0 ($P < 0.001$). Intentional LN dissection did not increase operative mortality or complication in both of thymoma and thymic carcinoma group. There was no difference in 10-year FFR rate between LND+ and LND- groups (81.9% *vs.* 76.9%, $P = 0.42$ in thymoma; 43.0% *vs.* 42.3%, $P = 0.19$ in thymic carcinoma).

Conclusions: Nodal status was an important prognostic factor in patients with thymic malignancies. Although LND did not improve long-term outcomes in thymic malignancies, LND can help identify pathologic stage more accurately.

Keywords: Lymph node dissection (LND); thymic malignancies

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