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

Yoohwa Hwang1, Chang Hyun Kang2, Kwan Yong Hyun2, Samina Park3, Eung Rae Kim2, Hyun Joo Lee2, In-Kyu Park4, Young Tae Kim2, Kyung Sik Naam1, Chang Young Lee1, Jin Gu Lee4, Dae Joon Kim3, Kyoung Young Chung3, Jong Ho Cho4, Hong Kwan Kim5, Yong Soo Choi6, Jin Gook Kim4, Jae Il Cho7, Young Mok Shim1, Jin San Bok5, Keun Dong Lee5, Seo Hoon Choi5, Hyung Ryul Kim5, Yong Hee Kim5, Dong Kwan Kim5, Seung Il Park5

1Department of Thoracic and Cardiovascular Surgery, SMG-SNU Boramae Medical Center, Seoul, South Korea; 2Department of Thoracic and Cardiovascular Surgery, Seoul National University Hospital, Seoul, South Korea; 3Department of Thoracic and Cardiovascular Surgery, Yonsei University Severance Hospital, Seoul, South Korea; 4Department of Thoracic and Cardiovascular Surgery, Samsung Medical Center, Seoul, South Korea; 5Department of Thoracic and Cardiovascular Surgery, Asan Medical Center, Seoul, South Korea

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 form 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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