

## AB045. PS02.09: Video-assisted thoracic surgery for thymoma: long-term follow up results and prognostic factors

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**Background:** With the fast development of video-assisted thoracic surgery (VATS), it is more and more common using VATS in the treatment of thymoma. The safety and short term follow-up results of thoracoscopic treatment of early stage thymoma have been reported in several studies. However, there were few long term follow-up results reported. The aim of this study is to evaluate the safety and effectiveness of thoracoscopic treatment of thymoma, more important, to report long term follow-up results of a large single center cohort.

**Method:** A retrospective review of a prospective database was done to identify patients who underwent surgical treatment of thymoma. One hundred fifty patients who had VATS resections for thymoma at Peking University People's Hospital from April 2001 to November 2014 were retrospectively reviewed. Only patients whose follow-up periods were more than 2 years after surgery were analyzed.

**Results:** Sixty-nine males (46%) and 81 females (54%) were involved in the study, the median age was 53 years (range, 12–85 years). For the whole cohort, average operation time was  $140 \pm 54.2$  min, median blood loss was 50 mL (range, 10–700 mL), median post-operative drainage time was 3 days (range, 1–11 days), median length of post-op stay was 5 days (range, 2–20 days). There were 7 patients (4.7%) converted to thoracotomy. The R0 resection rate of Masaoka stage I, II, III, IV was 100%, 100%, 93.7%, 80%, respectively. Eleven cases with post-operative complications were recorded and well managed, and no perioperative death was observed.

One hundred thirty-four patients (89.3%) were followed up successfully. Median follow-up was 59.5 months (range, 2–187 months). The 5- and 10-year overall survive (OS) was 91.4% and 84.8% respectively. Five-year OS of Masaoka stage I, II and III was 90.3%, 88.2% and 86.7% separately. Ten-year OS was 85%, 88.2% and 77% respectively. All the five cases of Masaoka stage IV were followed-up, and no death happened. Five cases of recurrence were observed in the whole group, the 5- and 10-year recurrence free survive (RFS) of the whole group were 96.5% and 94.4%. The 5- and 10-year RFS in Masaoka stage I + II was 98.1% and 98.1% separately. The 5- and 6-year RFS in Masaoka stage III was 90% and 60%. There was 1 case of recurrence in 5 Masaoka stage IV patients, 4-year RFS is 80%. Univariable analysis of prognostic factors of recurrence was age, Masaoka stage and histologic type (WHO type). Multivariable analysis of prognostic factors of recurrence were age and Masaoka stage, which mean recurrence tended to occur in younger patients ( $P=0.029$ , HR 0.87; 95% CI, 0.77–0.99) and Masaoka stage III + IV patients ( $P=0.037$ , HR 12.69; 95% CI, 1.17–138.22). Forty-four cases of patients (29.3%) combined with myasthenia gravis (MG). Thirty-six cases of MG patients (81.8%) were followed-up. Nine patients achieved complete remission and 19 patients achieved partial remission. The objective remission rate was 77.8%.

**Conclusions:** VATS was a safe and effective procedure for the treatment of thymomas with satisfied prognosis. The overall response rate of MG with thymoma treated by VATS was relatively high.

**Keywords:** Prognosis; video-assisted thoracic surgery (VATS); thymoma; long-term follow up

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