AB002. OA01.02: Modified subxiphoid thoracoscopic versus unilateral thoracoscopic approach for early-stage thymomas without myasthenia gravis

Jianyong Ding, Hao Wang, Li-Jie Tan, Qun Wang

Department of Thoracic Surgery, Zhongshan Hospital, Fudan University, Shanghai 200032, China

Correspondence to: Jianyong Ding. Department of Thoracic Surgery, Zhongshan Hospital, Fudan University, 180 Fenglin Road, Xuhui District, Shanghai 200032, China. Email: dingjianyongmd@163.com.

Background: Conventionally, minimally invasive thymectomy for early-stage thymoma is performed via unilateral thoracoscopic approach. However, it is sometimes criticized for bad exposure of anterior mediastinum and contralateral area which may be disadvantageous for the surgery. Thus, we attempted a modified subxiphoid thoracoscopic approach with innovative sternal-elevating technique to reach better surgical exposure and fewer traumas.

Methods: From January 2015 to June 2018, a total of 282 patients with clinically early-stage thymoma without myasthenia gravis were enrolled. Between them, 148 patients were performed thoracoscopic thymectomy via subxiphoid approach (Group S). Three subxiphoid incisions (12 mm ×1, 5 mm ×2) with the aid of artificial CO2 pneumothorax were used. Additionally, we used the sternum-elevating device (Rul-tractor, USA) through the 3rd intercostal incision (5 mm ×1) beside the sternum. And the other 134 cases underwent conventional thymectomy via unilateral 3-port thoracoscopic approach (Group UL). The outcome was compared.

Results: The two groups were comparable on patients' demographics, such as age, gender, tumor size, WHO type and Masaoka staging. Two cases were converted to open surgery in Group S (1 case due to bleeding and 1 due to technical difficulty), while 2 cases were converted to open surgery in Group UL (1 case due to bleeding and 1 due to tumor). No significant difference was found on blood loss [(51±34) *vs.* (53±44) mL, P=0.709]. Compared with Group UL, patients in Group S had much less surgical duration [(54±16) *vs.* (65±18) min, P=0.011], less pain scores (2.4±1.2 *vs.* 3.2±1.3, P=0.006), earlier drainage removal [(1.3±0.6) *vs.* (2.5±1.0) d, P=0.000] and less postoperative hospital stay [2 (range, 1–6) *vs.* 3 (range, 2–9) d, P=0.000]. The complications were similar (5.4% *vs.* 6.7%, P=0.644). And no perioperative death occurred.

Conclusions: This study suggests that the modified subxiphoid thoracoscopic approach seems to be more effective for thymectomy for early-stage thymoma. This novel approach could improve surgical exposure, accelerate the operative progress and result in less trauma and faster recovery.

Keywords: Minimally invasive thymectomy; thymomas; modified subxiphoid thoracoscopic approach

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