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10th International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection



RISK OF VENOUS THROMBOEMBOLISM AFTER SURGERY FOR LUNG CANCER ACCORDING TO THE SURGICAL APPROACH: VIDEO-ASSISTED THORACOSCOPIC SURGERY VS. THORACOTOMY

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Objectives:

We conducted a nationwide cohort study to investigate the risk and timing of venous thromboembolism (VTE) after surgery for non-small cell lung cancer (NSCLC) according to the surgical approach: video-assisted thoracoscopic surgery (VATS) vs. thoracotomy.

Methods:

Through the Danish Lung Cancer Registry, we identified all patients operated for NSCLC between 2003 and 2021, and assessed the risk of VTE events at 1-year follow-up by time-to-event analyses. Incidence rates were calculated within strata of surgical approach and year, and cumulative incidence functions within strata of surgical approach.

Results:

We included 13,197 patients (mean age 67.6 years, 52.4% female) of which 53.3% of patients underwent a VATS procedure. At 1-year follow-up, 151 VTE events had occurred in the VATS group (rate: 2.40 events/100 person-years) compared to 184 events in the thoracotomy group (rate: 3.41 events/100 person-years). The cumulative incidence of VTE at 1-year was 2.2% (95% confidence interval (CI): 1.9-2.6) in the VATS group, compared to 3.0% (95% CI: 2.6-3.5) in the thoracotomy group. In both groups, the hazard was highest within the first three months. The lower risk of VTE among patients undergoing VATS was observed throughout the study period.

Conclusions:

Surgery by VATS suggests a lower risk of VTE compared to those undergoing thoracotomy, with 1-year cumulative incidence rates of 2.2% and 3.0%, respectively. Despite substantial changes in both indications and performance of VATS over time, the risk of VTE seems lower with VATS.