JOURNAL CLUB

Outcomes after thoracoscopic versus open lobectomy

In this national database study from the USA, the short-term outcomes following thoracoscopic lobectomy were compared with open thoracotomy lobectomy.

From the Nationwide Inpatient Sample database, maintained by the Agency for Healthcare Research and Quality, all adult patients who underwent lobectomy as the principal procedure, by either thoracoscopy or thoracotomy during 2007 and 2008, were included. Patients with prior thoracotomy, or if both thoracoscopic and open lobectomy were listed as the approach, were excluded. All 68 350 patients were included, and 15% underwent a thoracoscopic lobectomy. Propensity score matching was used to reduce confounding by indication, and 10 173 thoracoscopic lobectomy patients were matched to 30 866 patients in the open lobectomy group.

There was no difference regarding in-hospital mortality between the open lobectomy group and the thoracoscopic lobectomy group (2.3% vs 1.6%). There were modest differences regarding postoperative complications, and 2 days shorter in hospital stay, favouring thoracoscopic lobectomy. Interestingly, about one-third of the minimally invasive lobectomies were performed at non-teaching centres, implying that the technique was not limited to highly specialised academic centres.

Limitations acknowledged by the authors were lack of clinical or pathological staging data, including tumour size and location, and other inherent weaknesses when using administrative databases for outcomes research.

Although this large national study suggests that thoracoscopic lobectomy was associated with less in-hospital morbidity compared with open lobectomy, the role of minimally invasive lobectomy is still unclear. Importantly, the long-term oncological efficacy needs to be ascertained before widespread use, because early stage lung cancer patients are referred for surgery with curative intent.

► Paul S, Sedrakyan A, Chiu YL, et al. Outcomes after lobectomy using thoracoscopy vs thoracotomy: a comparative effectiveness analysis utilizing the Nationwide Inpatient Sample database. *Eur J Cardiothorac Surg* 2013;43:813–7.

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