NATIONAL PERIOPERATIVE OUTCOMES OF PULMONARY LOBECTOMY FOR CANCER: THE INFLUENCE OF THE NUTRITIONAL STATUS

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Objectives: Nutritional assessment is not included yet as a major recommendation in lung cancer guidelines. The purpose of this study was to assess the influence on surgical outcome of the nutritional status of patients with primary lung cancer undergoing lobectomy.

Methods: We queried Epithor, the national clinical database of the French Society of Thoracic and Cardiovascular Surgery, and identified a retrospective cohort of 19,635 patients having undergone lobectomy for a primary lung cancer for the years 2005 to 2011. Their nutritional status was categorized according to the WHO definition: underweight (BMI <18.5): 857 patients (4.4%), normal (18.5 ≤ BMI <25): 9,391 patients (47.8%), pre-obesity (25 ≤ BMI <30): 6,721 patients (34.2%), obesity (BMI ≥30): 2,666 patients (13.6%). In-hospital mortality, pulmonary, cardiovascular, infectious and surgical complications rates were collected and analyzed for these various BMI groups.

Results: In the normal weight category, in-hospital rate, pulmonary, cardiovascular, infectious and surgical complications rates were: 2.6%, 14.6%, 5.5%, 1.2%, and 13.8% respectively. These outcome figures were similar for patients of the pre-obesity category. In-hospital mortality was significantly lower in obese patients (1.9%, P = 0.025), and significantly higher in underweight patients (4.1%, P = 0.025). Obese patients experienced less surgical complications (7%, P < 0.0001), equal pulmonary and infectious complications (15.1% and 1.8%), but more cardiovascular complications (7.2%, P = 0.008). Underweight patients experienced more pulmonary (21.1%) and surgical (23.2%) complications (P < 0.0001), equal infectious complications (1.9%, P = 0.15), and less cardiovascular complications (3.5%, P = 0.025).

Conclusions: Despite having an increased risk for postoperative cardiovascular complications, obese patients should undergo surgical standard of care therapy for appropriately stage-specific lung cancer. In underweight patients, in addition to preoperative rehabilitation including a nutritional program, attention should be given to aggressive prophylactic respiratory therapy in the perioperative period, and specific intraoperative actions such as the routine coverage of the bronchial stump.

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