عنوان مقاله:

Changes in Blood Gases and Hemodynamic Parameters in Patients Undergoing Lung Resection Surgery and Its Clinical Implications

محل انتشار:

مجله پزشکی قلب و قفسه سینه, دوره 7, شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Abid Saleem - *Plastic Surgeon, Department of Cardiovascular and thoracic surgery, SKIMS, Soura, Srinagar, JK, India*

Wahid Syed - *Cardiovascular and thoracic surgeon, Department of Cardiovascular and thoracic surgery, SKIMS, Soura, Srinagar, JK, India*

Akbar Bhat - *Cardiovascular and thoracic surgeon, Department of Cardiovascular and thoracic surgery, SKIMS, Soura, Srinagar, JK, India*

Lone Ghulam Nabi - *Cardiovascular and thoracic surgeon, Department of Cardiovascular and thoracic surgery, SKIMS, Soura, Srinagar, JK, India*

خلاصه مقاله:

Introduction: Lung resection surgery is a challenge to thoracic surgeons. Outcome of surgery depends on patients' tolerance to reduced lung volume and hemodynamic alterations. The present study aimed to investigate the changes in blood gases and hemodynamic parameters in patients undergoing lung resection surgery and the associated clinical implications. Materials and methods: This study included 25 candidates for lung resection surgery. After thoracotomy, isolation of pulmonary artery (PA) and veins were performed as usual. Blood samples were taken from the PA and radial artery simultaneously before clamping, as well as 5 and 20 min after clamping the PA. The systemic as well as PA pressure was also measured. All patients were followed up, arterial blood gas and pulmonary function tests were performed 3-6 months after the surgery. Results: Cough (56%) and hemoptysis (56%) were the commonest symptom. Most prevalent pathology was squamous cell carcinoma (56%). Lobectomy was the most common procedure performed on the patients. No change was observed in blood gases before and after the clamping of the PA. There was a significant increase in the mean PA pressure (P<0.001), while the mean arterial pressure showed no significant change (P=0.457). The pulmonary function tests showed a significant decrease in VC, forced vital capacity, and FEV1 at the postoperative follow-up. The patients with a pre-operative PCO2 of > 45 mmHg had more postoperative complications than those with a PCO2 of ≤45 mmHg (P=0.047). Conclusion: Given the lack of any significant changes in the PCO2 and oxygen saturation following the lung resection surgery, it seems that this parameter is not a limiting factor for deciding on operability in patients with lung lesions having an acceptable preoperative PO2 level. However, the patients with a PCO2 of > 45 mmHg should be categorized as high-risk group since they have significantly higher postoperative complications/morbidity.

کلمات کلیدی:

Blood Gasometery, Complications, hemodynamic changes, Lung Function, Lung Resection