

ABSTRAK

Latar Belakang: Teknik *one lung ventilation* (OLV) memberikan keuntungan operatif yang signifikan, namun dapat menimbulkan berbagai komplikasi fisiologis yang berpotensi mempengaruhi fungsi kardiovaskular. Perubahan hemodinamik intraoperatif dapat menyebabkan komplikasi infark miokard postoperatif dan meningkatkan risiko mortalitas. **Tujuan:** Mengetahui perbedaan kadar troponin T dan I pasca bedah toraks dengan OLV. **Metode:** Penelitian kohort melibatkan 39 pasien pasca bedah toraks dengan OLV di RSUD Prof. Dr. Margono Soekarjo yang memenuhi kriteria inklusi. Seluruh subjek menjalani OLV dengan ventilasi 50% udara : 50% oksigen, volume tidal 5-6 mL/kgBB, dan laju pernapasan 12 kali/menit. Kadar troponin T dan I diukur sebelum dan sesudah operasi. Pencatat dilakukan terhadap status hemodinamik dan parameter perioperatif. **Hasil:** Kadar troponin T ($8,19 \pm 2,43$ vs $6,32 \pm 1,19$ ng/L; $p < 0,001$) dan I ($57,02 \pm 17,33$ vs $49,84 \pm 16,30$) postoperasi secara signifikan lebih tinggi dibandingkan preoperasi. Analisis multivariat menunjukkan bahwa faktor nilai PaO₂ postoperasi (Troponin T; B = 0,530; $p = 0,002$) (Troponin I; B = 0,544; $p = 0,013$) yang paling berpengaruh terhadap kadar troponin postoperasi. **Kesimpulan:** Pasien yang menjalani bedah toraks dengan OLV mengalami peningkatan kadar troponin T dan I postoperasi yang signifikan. Faktor nilai PaO₂ berpengaruh terhadap kadar troponin postoperasi.

Kata Kunci: *one lung ventilation*, bedah toraks, troponin, infark miokardium

ABSTRACT

Background: The one-lung ventilation (OLV) technique offers significant operative advantages but may cause various physiological complications that can potentially affect cardiovascular function. Intraoperative hemodynamic changes may lead to postoperative myocardial infarction and increase mortality risk. **Aim:** To determine the differences in postoperative troponin T and I levels in thoracic surgery with OLV. **Methods:** This cohort study involved thirty nine patients who underwent thoracic surgery with OLV at Prof. Dr. Margono Soekarjo General Hospital and met the inclusion criteria. All subjects received OLV with a ventilation ratio of 50% air to 50% oxygen, a tidal volume of 5–6 mL/kg body weight, and a respiratory rate of 12 breaths per minute. Troponin T and I levels were measured before and after surgery. Hemodynamic status and perioperative parameters were recorded. **Result:** Postoperative troponin T (8.19 ± 2.43 vs. 6.32 ± 1.19 ng/L; $p < 0.001$) and troponin I (57.02 ± 17.33 vs. 49.84 ± 16.30 ng/L; $p < 0.001$) levels were significantly higher than preoperative values. Multivariate analysis revealed that postoperative PaO₂ (Troponin T; $B = 0,530$; $p=0,002$) (Troponin I; $B = 0,544$; $p=0,013$) was the most influential factors affecting postoperative troponin levels. **Conclusion:** Patients undergoing thoracic surgery with OLV exhibited a significant postoperative increase in troponin T and I levels. Postoperative PaO₂ was identified as key factor influencing postoperative troponin concentrations.

Keywords: one lung ventilation, thoracic surgery, troponin, myocardial infarction