

PENGARUH PEMBERIAN OKSIGEN MELALUI KANUL NASAL TERHADAP SATURASI OKSIGEN PADA PASIEN DENGAN ANESTESI UMUM DI RSUD KOTA BANDUNG

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ABSTRAK

Latar Belakang : Laringoskopi pada prosedur intubasi endotrakeal dapat menyebabkan periode *apnea* sementara yang berisiko menurunkan saturasi oksigen pasien. Pemberian oksigen melalui kanul nasal selama laringoskopi dapat membantu mempertahankan saturasi oksigen selama tindakan berlangsung.

Tujuan : Mengetahui pengaruh pemberian oksigen melalui kanul nasal selama laringoskopi terhadap saturasi oksigen pada pasien dengan anestesi umum di RSUD Kota Bandung.

Metode : Penelitian ini menggunakan desain *quasi experiment* dengan pendekatan *pretest-posttest with control group design*. Sampel penelitian berjumlah 66 responden yang dibagi menjadi kelompok intervensi dan kelompok kontrol masing-masing sebanyak 33 responden menggunakan teknik *consecutive sampling*. Kelompok intervensi diberikan oksigen melalui kanul nasal dengan aliran 4 L/menit selama tindakan laringoskopi, sedangkan kelompok kontrol tidak diberikan oksigen melalui kanul nasal selama laringoskopi. Saturasi oksigen diukur menggunakan *pulse oxymetry* sebelum dan sesudah laringoskopi, kemudian dihitung perubahan ΔSpO_2 . Analisis data menggunakan uji *Wilcoxon signed-rank* dan *Mann-Whitney U* dengan tingkat signifikansi $\alpha = 0,05$.

Hasil : Hasil penelitian menunjukkan bahwa kelompok intervensi mengalami peningkatan rata-rata ΔSpO_2 sebesar $1,6 \pm 0,9\%$, sedangkan kelompok kontrol mengalami penurunan sebesar $-1,7 \pm 1,6\%$. Hasil uji *Wilcoxon* menunjukkan terdapat perbedaan signifikan nilai SpO_2 sebelum dan sesudah laringoskopi pada kedua kelompok dengan nilai $p = 0,000$ ($p < 0,05$). Hasil uji *Mann-Whitney U* menunjukkan terdapat perbedaan signifikan perubahan ΔSpO_2 antara kelompok intervensi dan kelompok kontrol dengan nilai $p = 0,000$ ($p < 0,05$).

Kesimpulan : Pemberian oksigen melalui kanul nasal selama laringoskopi berpengaruh terhadap peningkatan dan pemeliharaan saturasi oksigen pada pasien dengan anestesi umum di RSUD Kota Bandung.

Kata Kunci : kanul nasal, laringoskopi, saturasi oksigen, anestesi umum.

THE EFFECT OF OXYGEN ADMINISTRATION THROUGH NASAL CANNULA ON OXYGEN SATURATION IN PATIENTS UNDERGOING GENERAL ANESTHESIA AT RSUD KOTA BANDUNG

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ABSTRACT

Background : Laryngoscopy during endotracheal intubation may cause a temporary apnea period that can lead to a decrease in patients' oxygen saturation. Oxygen administration via a nasal cannula during laryngoscopy may help maintain oxygen saturation throughout the procedure.

Objective : To determine the effect of oxygen administration via a nasal cannula during laryngoscopy on oxygen saturation in patients undergoing general anesthesia at Bandung City Regional General Hospital.

Methods : This study employed a quantitative approach using a quasi-experimental pretest–posttest with control group design. A total of 66 respondents were recruited using a consecutive sampling technique and divided into an intervention group and a control group, with 33 respondents in each group. The intervention group received oxygen via a nasal cannula at a flow rate of 4 L/min during laryngoscopy, whereas the control group did not receive oxygen via a nasal cannula during laryngoscopy. Oxygen saturation was measured using pulse oxymetry values before and after laryngoscopy, and the change in SpO₂ (Δ SpO₂) was subsequently calculated. Data were analyzed using the Wilcoxon signed-rank test and Mann–Whitney U test with a significance level of $\alpha = 0.05$.

Results : The results showed that the intervention group experienced a mean increase in Δ SpO₂ of $1.6 \pm 0.9\%$, whereas the control group experienced a mean decrease of $1.7 \pm 1.6\%$. The Wilcoxon signed-rank test demonstrated a significant difference in SpO₂ values before and after laryngoscopy in both groups ($p = 0.000$; $p < 0.05$). The Mann–Whitney U test revealed a significant difference in Δ SpO₂ changes between the intervention and control groups ($p = 0.000$; $p < 0.05$).

Conclusion : Oxygen administration via a nasal cannula during laryngoscopy significantly improves and maintains oxygen saturation in patients undergoing general anesthesia at Bandung City Regional General Hospital.

Keywords : nasal cannula, laryngoscopy, oxygen saturation, general anesthesia.