

**PENGARUH TRAKHEOSTOMI DILATASI PERKUTAN
TERHADAP FUNGSI VENTILASI PADA PASIEN KRITIS
DENGAN VENTILASI MEKANIK
DI ICU RSUP DR SARDJITO**

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INTISARI

Latar Belakang : Trakheostomi dilatasi perkutan merupakan prosedur standar untuk tatalaksana jalan nafas pada pasien yang membutuhkan bantuan ventilasi jangka panjang di unit perawatan intensif. PDT berpengaruh terhadap ventilasi dengan cara mengurangi ruang rugi, menurunkan resistensi jalan nafas dan menurunkan kerja pernafasan.

Metode : Penelitian ini menggunakan rancangan *experimental pre-post test one group* untuk menilai pengaruh PDT terhadap perbaikan parameter fungsi ventilasi yang diukur dari parameter resistensi jalan nafas dan komplians paru-paru. Subyek penelitian berjumlah sebanyak 18 pasien kritis yang dirawat dengan ventilasi mekanik sesuai indikasi dan dilakukan PDT dengan teknik ciaglia di unit perawatan intensif RSUP Dr. Sardjito. Semua subyek/keluarga telah menandatangani *informed consent*.

Hasil : PDT berpengaruh terhadap perbaikan resistensi inspirasi ($19,14 \pm 0,75$) sebelum PDT dan ($11,11 \pm 0,98$) setelah PDT ($p < 0,05$; 95 CI), resistensi ekspirasi ($27,16 \pm 0,68$) sebelum PDT dan ($15,92 \pm 1,46$) setelah PDT ($p < 0,05$; 95 CI), komplians dinamis ($19,68 \pm 1,71$) sebelum PDT dan ($20,31 \pm 1,59$) setelah PDT ($p < 0,05$; 95 CI). PDT tidak berpengaruh terhadap respon fisiologis hemodinamik dan analisa gas darah ($p > 0,05$).

Kesimpulan : Resistensi jalan nafas inspirasi, resistensi jalan nafas ekspirasi dan komplians dinamis merupakan parameter yang terpengaruh PDT. PDT dapat memperbaiki parameter fungsi ventilasi tersebut.

Kata kunci : PDT, resistensi jalan nafas inspirasi, resistensi jalan nafas ekspirasi, komplians dinamis

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**THE EFFECT OF PERCUTANEUS DILATATIONAL TRACHEOSTOMY
ON FUNCTION OF VENTILATION IN CRITICALLY ILL PATIENTS
WITH MECHANICAL VENTILATOR SUPPORT
IN INTENSIVE CARE UNIT OF DR SARDJITO
GENERAL HOSPITAL**

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ABSTRACT

Background: *Percutaneous dilatational tracheostomy is a standard procedure for longterm airway management in critically ill patients requiring prolonged mechanical ventilator in intensive care unit. Effect of tracheostomy on ventilation by reduces dead space, airway resistance and work of breathing. The aim of this study was to determine the effect of PDT on parameters of functional ventilation in critically ill patients with mechanical ventilator support.*

Method: *Design with pre-post test one group before and after procedure of 18 critically ill patients with mechanical ventilation as indicated PDT in the intensive care unite of Dr Sardjito general hospital. Airway resistance and lung compliance as a parameters of functional ventilation were measured at 24, 12 and 6 hours before and after procedure. Comparasions of the parameters were performed with paired t-test and wilcoxon-rank test ($p < 0,05$).*

Result: *The effect of PDT to inspiration airway resistance ($19,14 \pm 0,75$) before and ($11,11 \pm 0,98$) after ($p < 0,05$; 95 CI), expiration airway resistance ($27,16 \pm 0,68$) before and ($15,92 \pm 1,46$) ($p < 0,05$; 95 CI), dynamic compliance ($19,68 \pm 1,71$) before and ($20,31 \pm 1,59$) after ($p < 0,05$; 95 CI). Hemodynamic physiological responses and arterial blood gas analysis were not statistically significant ($p > 0,05$).*

Conclusion: *Inspiration airway resistance, expiration airway resistance and dynamic compliance as the parameters of functional ventilation can effect of PDT. PDT can improve on parameters of functional ventilation above.*

Keywords: *PDT, inspiration airway resistance, expiration airway resistance and dynamic compliance.*

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