

ABSTRAK

Latar belakang: Cedera kepala merupakan masalah kesehatan karena dapat menimbulkan trauma pada kepala dan otak bahkan menyebabkan kematian. Pada pasien cedera kepala yang mengalami penurunan kesadaran, kemampuan mempertahankan jalan nafas juga berkurang sehingga pertolongan medis (trakeostomi) sangat dibutuhkan. Trakeostomi bertujuan untuk mempertahankan jalan nafas agar udara dapat masuk ke paru-paru dan memintas jalan nafas atas dengan cara membuka dinding depan trakea. Trakeostomi digolongkan trakeostomi dini dan trakeostomi lambat.

Tujuan: Mengetahui hubungan antara trakeostomi dini dengan peningkatan *glasgow coma scale* dan percepatan penyapihan ventilator mekanik pada pasien cedera otak berat.

Metode: Penelitian ini bersifat observasional analitik dengan disain potong lintang (*cross sectional*). Pengambilan sampel menggunakan metode *purposive sampling*. Sampel yang digunakan sebanyak 67 sampel dengan data diperoleh dari data sekunder berupa rekam medis di Rumah Sakit PKU Muhammadiyah Yogyakarta pada Desember 2015–Februari 2016. Data dianalisis dengan uji *Mann Whitney Test* dan *Fisher's Exact Test*.

Hasil: Dari 67 sampel, 30 sampel dilakukan trakeostomi dini diantaranya 19 sampel dipasang ventilator mekanik dan 30 sampel dilakukan trakeostomi lambat diantaranya 17 sampel dipasang ventilator mekanik. Waktu peningkatan *glasgow coma scale* pada pasien cedera otak berat yang dilakukan trakeostomi dini dan trakeostomi lambat yang dianalisis menggunakan *Mann Whitney Test* dan *Fisher's Exact Test* menunjukkan $p=0,000$. Lama pemakaian ventilator mekanik pada pasien cedera otak berat yang dilakukan trakeostomi dini dan trakeostomi lambat yang dianalisis menggunakan *Mann Whitney Test* menunjukkan $p=0,000$, sedangkan yang dianalisis dengan menggunakan *Fisher's Exact Test* menunjukkan $p=0,003$.

Kesimpulan: Terdapat hubungan yang signifikan antara trakeostomi dini dengan rata-rata waktu peningkatan *glasgow coma scale* dan lama pemakaian ventilator mekanik pada pasien cedera otak berat.

Kata kunci: cedera otak, trakeostomi, *glasgow coma scale*, ventilator mekanik

ABSTRACT

Background: Head injury is a health problem because it can cause trauma to the head and brain with a variety of complications that can even lead to death. In head injury patients who experience a decrease of consciousness, the ability to maintain airway is also reduced so the medical help that can be given is a tracheostomy. Tracheostomy as a medical measures that aim to maintain the airway so that air can get into the lungs and bypasses the upper airway by opening the anterior trachea. Tracheostomy can be classified as early and late tracheostomy.

Aim: To determine the relationship between early tracheostomy with increased glasgow coma scale and acceleration of a mechanical ventilator weaning in patients with severe traumatic brain injury.

Method: This study was an observational analytic study with cross sectional design. Samples are collected with purposive sampling method. There are 67 samples that has been selected through inclusive and exclusive criteria. Data was gathered from medical record at PKU Muhammadiyah Yogyakarta Hospital within period December 2015 - February 2016. Data was analyzed with Mann Whitney Test and Fisher's Exact Test.

Results: Of the total 67 samples, early tracheostomy was performed on 30 samples of which 19 samples are given a mechanical ventilator and slow tracheostomy was performed on 30 samples of which 17 samples are given a mechanical ventilator. Time of increased glasgow coma scale in patients with severe traumatic brain injury that has been performed early tracheostomy and slow tracheostomy have been analyzed statistically using Mann Whitney Test and Fisher's Exact Test showed p value = 0,000. In addition, the duration of use mechanical ventilation in patients with severe traumatic brain injury that has been performed early and late tracheostomy that have been analyzed statistically using Mann Whitney Test showed p value = 0.000, whereas that have been statistically analyzed using Fisher's Exact Test showed p value = 0,003.

Conclusion: There was a significant correlation between early tracheostomy with the average time of an increase in the glasgow coma scale and duration of use mechanical ventilation in patients with severe traumatic brain injury.

Key word: brain injury, tracheostomy, glasgow coma scale, mechanical ventilator