A Safe Method to Prevent Ventilator-Associated Pneumonia (VAP): Endotracheal Tube Cuff Management

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Dear Editor

Ventilator-Associated pneumonia (VAP) is one of the prevalent nosocomial infections and the most severe Acquired infection in intensive care units (ICUs) [1]. VAP usually occurs forty-eight hours after the starting of mechanical ventilation. This infection has several complications, including hospital long stay, high medical costs, high antibiotic use, and high mortality rates [2,3]. The prevalence of VAP in developing countries is more than that in developed countries [2]. Despite recent advances in diagnostic and therapeutic methods, VAP has remained a common infection and a major cause of mortality in the ICUs [2,3]. VAP affects approximately 27% of critically ill patients in ICU wards [2,3]. Prevention of VAP is a significant challenge for workers in intensive care units and should be considered as a priority. There are some strategies to prevent VAP, such as appropriate sedation and early weaning, semi-seating position, oral hygiene, applying noninvasive positive pressure ventilation (NPPV), tracheal secretion management, nurses hand hygiene, selective decontamination of the digestive tract, appropriate antibiotic therapy, and subglottic secretion suctioning [2,4,5]. Another under attention approach to preventing VAP is to ensure adequate pressure of endotracheal cuff. Tracheal cuff pressure should be maintained in the accurate range (20–30 cm H2O), and under inflation and over inflation can be associated with the risk of aspiration and tracheal injury [6,7]. Micro aspiration of subglottic secretions due to cuff under Inflation is one of the most critical risk factors for the VAP [4]. Therefore, ensuring adequate pressure of cuff to prevent micro aspiration is a low-cost, easy, and practical approach in VAP prevention. However, the importance of this technique in guidelines and studies is under attention. Various methods are used to assess the accuracy of tracheal cuff pressure, including manual (Minimal leak and Finger Palpation) and automatic (Direct Manometer and Continuous Monitoring) methods. Two common methods for checking the accuracy of cuff pressure are the manual method (Minimal leak) and the use of direct manometer [6]. Studies showed that continuous monitoring of cuff pressure could also be more efficient in VAP prevention [1,4]. Given the importance of this issue, the design and implementation of the guillotines to assess and ensure adequate cuff pressure along with other measures is necessary and can help to prevent VAP.

Keywords: Ventilator-Associated Pneumonia, Prevention, Endotracheal Tube
# یک روش ایمن جهت پیشگیری از پنومونی وابسته به ونیتالزور: مدیریت فشار کاف تراشه

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<td>پنومونی ناشی از ونیتالزور یکی از عقوقنی‌های شایع بیمارستانی و مهم‌ترین عقوقنی اکسترنی در بخش‌های مراقبت ویژه است [1]. پنومونی ناشی از ونیتالزور عقوقنی جدیدی است که ابتدا از 4 سال بعد از شروع تبخیر مکانیکی در بیماران آلمانی و همچنین به عنوان ساختار میومبر و پیش‌بینی‌های جدیدی برای پیش‌بینی و درمان ناشی از ونیتالزور در گزارش‌های متعددیورد شده‌است. همچنین پیش‌بینی‌های مشخصی و عقوقنی در دست بررسی و درمان انجام شده و در بررسی‌های مشخصی در گزارش‌های متعددیورد شده‌است.</td>
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| | کلیدواژه‌ها: همبایی بین حریفان، عامل‌درک نتمی، بخش‌های مراقبت ویژه

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دفتر: 12، شماره 1399، صفحه: 2-1
مجله پرستاری مراقبت های ویژه

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