

DO WE KNOW HOW TO PROPERLY SEAL THE SUPRAGLOTTIC AIRWAY DEVICES CUFF? PILOT DATA

Michael Czekajlo^{1,2} , Agata Dabrowska^{1,3} 

¹Polish Society of Medical Simulation, Poland

²Hunter Holmes McGuire Center for Simulation and Healthcare, Virginia Commonwealth University, Richmond, United States

³Department of Medical Rescue, Poznan University of Medical Sciences, Poznan, Poland

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To the Editor,

With great interest, we read the article “Supraglottic airway devices as a method of airway management in prehospital setting” [1]. Supraglottic airway devices are now an alternative to endotracheal intubation in both pre-hospital and inpatient settings. While for CombiTube the manufacturer recommends filling the sealing cuffs with appropriate air volumes, for supraglottic airway it is recommended that the

sealing cuff pressure should not exceed 60cm H₂O. Insufficient inflation of the device’s sealing cuffs may result in the displacement of the mask or laryngeal tube, leakage and consequent air leakage or increased risk of aspiration [2, 3].

Excessive pressure in the sealing cuff may result in ischemia of the tissues directly adjacent to the cuff and then in the formation of a decubitus ulcer. For this reason, it is essential that pressure measuring is used to determine the extent to which the cuff is inflated. In the case of overfilling of the cuff sealing the endotracheal tube, postintubation sore throat or hoarseness can also be observed [4]. As indicated by Sal et al., the cuff inflation pressure should be monitored using a manual cuff gauge or continuous monitoring of the cuff pressure [5]. An example of such a device is the low-pressure cuff pressure gauge (Portex Cuff Inflator Pressure Gauge, Avenida Diagonal, Barcelona, Spain; Fig.1), which allows precise measurement of pressure in the range from 0 to 120 cm H₂O.

The aim of the study was to evaluate the knowledge and attitudes of nurses towards monitoring the pressure in cuffs sealing intubation tubes and supraglottic airway devices.

The survey was conducted on the basis of an author’s questionnaire. The survey involved 75 nurses working in medical clinics. Among the studied group, all persons had experience in airway management in patients in emergency conditions. 12 persons from the study group (16%) declared that there is a low-pressure cuff pressure gauge in the office. Only 12% of participants declared that they were



FIGURE 1. Portex Cuff Inflator Pressure Gauge

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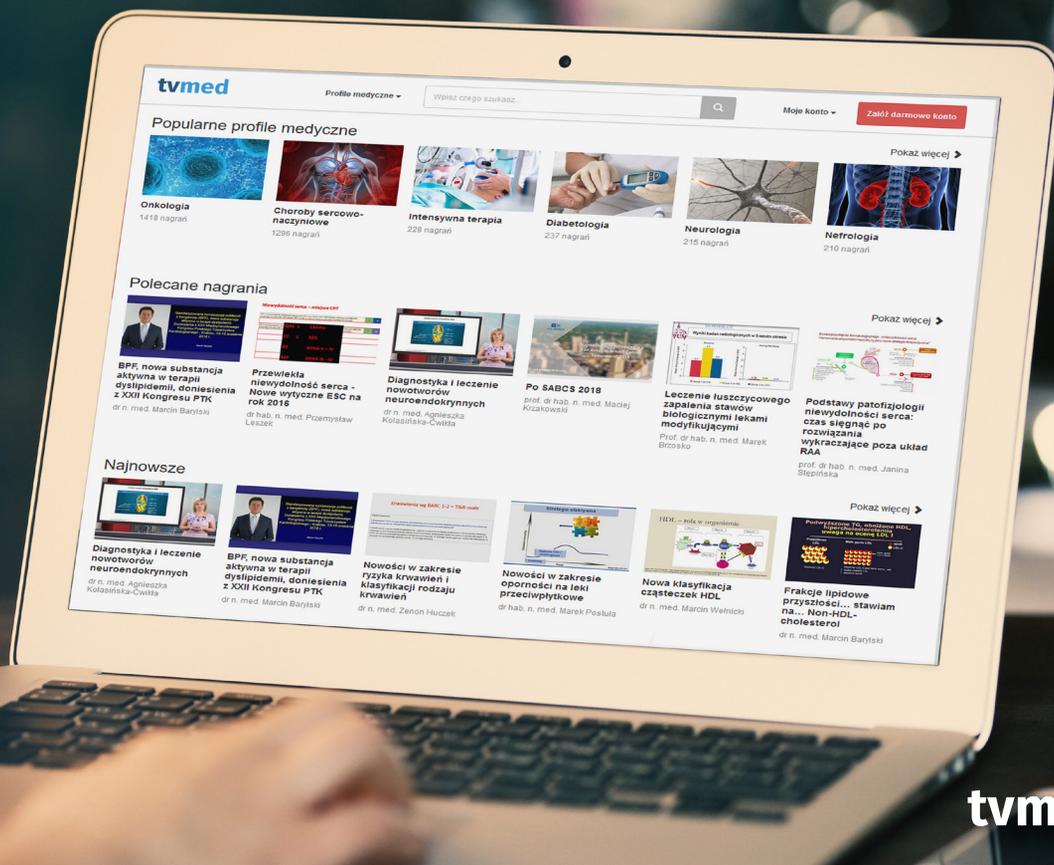
Michael Czekajlo, Polish Society of Medical Simulation, Poland, Hunter Holmes McGuire Center for Simulation and Healthcare, Virginia Commonwealth University, Richmond, United States; e-mail: michael.czekajlo@vcuhealth.org

using cuff pressure gauges to measure the pressure in the sealing cuff. 70.7% of participants believe that the palpation measurement of the control balloon filling with air is sufficient and does not require the use of pressure gauges. It is worth emphasizing here that in Giusti et al. [6] study, only 10% of respondents could correctly detect a pressure in the recommended range using manual palpation.

In the worldwide scientific literature, we can find a large number of confirmations of the significant influence of pressure in the cuff sealing the intubation tube or supraglottic ventilation devices on the rate of complications related to airway devices [7–9]. They indicate how important a parameter in patient care is to maintain the correct pressure range in the sealing cuff. The study shows that nurses have limited knowledge about the use of low-pressure cuff pressure gauges. It is advisable to implement training on the correctness of airway management not only in the context of endotracheal tube insertion or airway management using supraglottic airway devices but also on the correctness of sealing of these devices.

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