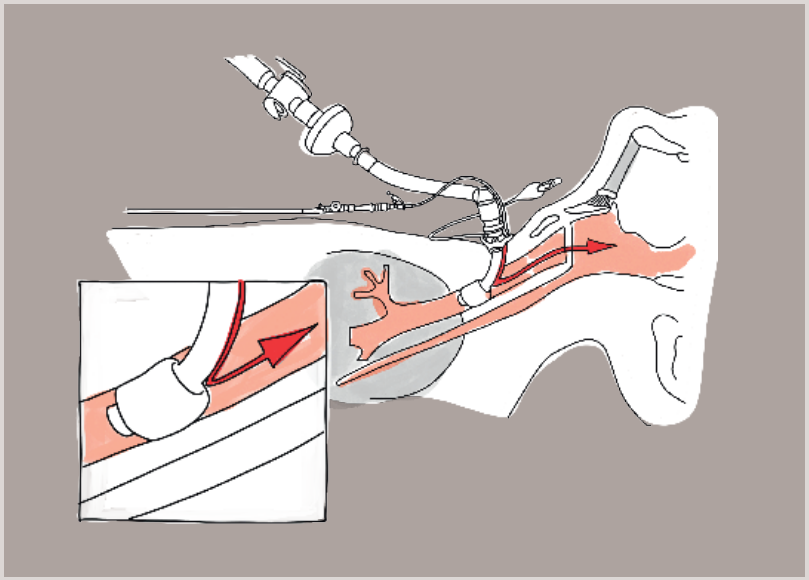

Above Cuff Vocalization (ACV) can be a beneficial technique for patients with tracheostomy tubes who are dependent on an inflated cuff to regain their ability to phonate and to sensitize the upper airway, thereby improving communication, swallowing, and overall quality of life.[1-3]

ACV is typically recommended for patients who are wearing a cuffed tracheostomy tube with subglottic suction line and who are unable to tolerate cuff deflation.

When the primary goal of ACV is phonation or communication, it is essential for patients to be awake, cooperative, and physically capable of phonating.

It is important to acknowledge that not all patients will immediately achieve phonation, and some may require multiple ACV sessions before successful phonation is achieved. Continuous reassessment of the patient following each session is crucial, and adjustments should be made considering their individual needs and comfort, including their positioning during the ACV procedure.

Additionally, it is essential to recognize that the objective of an ACV session may not always be phonation; sometimes, the focus may be on sensitizing the upper airway.

References

1. Petosic A, Viravong MF, Martin AM, Nilsen CB, Olafsen K, Berntzen H. Above cuff vocalisation (ACV): A scoping review. Acta Anaesthesiol Scand. 2021 Jan;65(1):15-25. doi: 10.1111/aas.13706. Epub 2020 Nov 1. PMID: 32920849; PMCID: PMC7756796.

2. Mills CS, Michou E, King N, Bellamy MC, Siddle HJ, Brennan CA, Bojke C. Evidence for Above Cuff Vocalization in Patients With a Tracheostomy: A Systematic Review. Laryngoscope. 2022 Mar;132(3):600-611. doi: 10.1002/lary.29591. Epub 2021 May 1. PMID: 33932229.

3. Mills CS, Cuthbertson BH, Michou E. What's new in reducing the impact of tracheostomy on communication and swallowing in the ICU. Intensive care medicine. 2023 Apr;49(7), 860-863.

Explain the planned procedure to the patient. Prepare for possible adverse reactions such as increased secretion, coughing, and nausea.

Verify that the upper airways are not obstructed.

Clear the subglottic space from secretions using subglottic suctioning.

Connect the adjustable air or oxygen supply via a fingertip or Y-connector to the Luer connector of the subglottic suction line.

Introduce air slowly through the subglottic suction line into the upper airways, beginning with 1 liter per minute and gradually increasing to a typical flow rate of 3–6 liters per minute, depending on the patient's needs. To prevent laryngeal drying, ensure flow rates do not exceed 12 liters per minute.

Utilize the fingertip or Y-connector to control the duration of airflow. This timeframe should be synchronized with the patient's exhaling rhythm.

Adjust airflow and duration[1] (maximum 15 minutes) within the patient's comfort zone.

Continuously monitor the patient's tolerance and make adjustments to parameters such as flow rate and duration of airflow as necessary.

Upon completion, turn off the airflow through the subglottic suction line and disconnect the equipment used. Document the trial following local guidelines.

Note

- The airflow through the upper airways may irritate the patient or could potentially lead to increased secretion, coughing, or nausea.
- If needed, air can be humidified before introducing through the subglottic suction line to prevent laryngeal drying out.
- If the voice sounds gruff, repeat subglottic suctioning to clear the airway and/or reposition the patient.
- Adjust the duration of a single ACV session based on the capabilities and endurance of the patient.
- Utilize short episodes of ACV, with a maximum duration of 15 minutes, to prevent drying out of the laryngeal mucosa.

This step-by-step description is not intended to replace the instructions for use of a tracheostomy tube. For further information, please consult our website and local guidelines, and adapt the steps as necessary.

Head office:
Atos Medical AB
Hyllie Boulevard 17
SE-215 32 Malmo, Sweden
Tel: +46 (0) 415 198 00
Email: info@atosmedical.com

Manufacturer:
Tracoe Medical GmbH
Reichelsheimer Straße 1/3
55268 Nieder-Olm, Germany

Atos

PM35819-TcEN 202501