

medscape.com/article/220563-overview#a1.

RESPIRATORY FAILURE AS A RESULT OF CHRONIC IMPAIRED VENTILATION IN ACTUALIZATION OF INSUFFICIENT RESPIRATION: A CASE REPORT

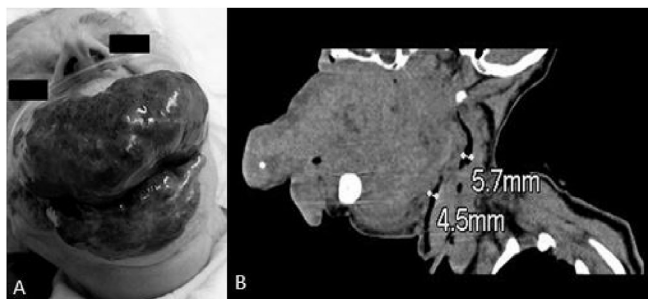
D. Bartolek Hamp*, R. Leženić, M. Duper Handabaka, T. Goranović. *Department of Anaesthesiology and Intensive Care Unit, General Hospital Dubrovnik, Croatia*

* Corresponding author.

E-mail address: dbartolekh@gmail.com (D. Bartolek Hamp).

Background and goal of study: Respiratory failure is a consequence of insufficient pulmonary gas exchange followed by hypoxaemia ($pO_2 < 60$ mmHg) and/or hypercarbia ($pCO_2 > 55$ mmHg). Gas exchange is enabled in a presence of preserved breathing function along with the open airway. Primary, lungs are included in trans-membrane (respiration), and thorax with muscle in mechanical (ventilation) gas exchange. Secondary, malfunction of any organic system, included in the respiration and ventilation (musculoskeletal, circulatory, nervous, urinary), may directly (pulmonary oedema, pneumonia, lung embolism) or indirectly (oral tumour, sepsis) contributed to respiratory failure. Haemangioma is a congenital, benign and the most common vascular tumour usually related to the infants and childhood with an incidence of 4–10%. In adults, it is very rare, especially in oropharynx. Its silent expansion through this region is specified by airway occlusion and affecting functions depending on location (dysfunction in speaking, swallowing and salivation, etc.) and finally by dyspnoea. However, the cause of respiratory insufficiency is most likely to be dominated by one source, impaired ventilation (inability of air flow) or respiration (insufficient gas exchange), it could be initiated by bought. We are going to present a case with huge inoperable oropharyngeal tumour (haemangioma) where respiratory failure occurred in presence of airway obstruction followed by acute bilateral pneumonia.

Material and methods: An 80-ten old female was admitted to the hospital with difficult breathing, dyspnoeic and tachypnoeic, weak, dehydrated, hypoxic ($SpO_2 = 88\%$) and afebrile. A huge prominence of intra- and extra-oral tumour was observed (A). MSCT confirmed vascular tumour (haemangioma; 140x100 mm) that completely compressed oropharynx and obstructed hypopharynx, maintaining an air column at only 4.5–5.7 mm (B).



Urgent tracheostomy was simply performed under local anaesthesia. Despite them, general condition of the patient rapidly worsens. The patient died 24 hours from the admitting to the hospital in spite of the intensive therapy, due to progressed bilateral pneumonia (Haemophilus influence; MSCT confirmed acute inflammatory lung infiltration of the right basal and sub-pleural middle lobe and left posterior segment of the lower lung) followed by sepsis, disseminated intravascular coagulation and multiple organ failure.

Result and discussion: In our case the tumour has been presented during years, growing slowly to inoperable dimension where patient, recently could be able to intake only a liquid, and breathe in half-sitting position. Lechien JR and co-workers reviewed 13 cases of oropharynx haemangioma published in English during 55 years (1961–2016), retrospectively. In only three of them, tumour caused dyspnoea and has been planned for surgery. Initially expected respiratory recovery due to tracheotomy and mechanical ventilation support, could not be achieved in order to compromise

respiration by acute bilateral pneumonia complicated by sepsis. An extracorporeal membrane oxygenation could be effective in patients with acute lung infection and impaired respiratory function.

Conclusion: Recovery of the respiration insufficiency depends on preserved ventilation followed by unobstructed airway as the preserved gas-exchanges true the enabled respiration. Recently, modern technic are widely available for release of obstructed airway. In cases, where mechanical ventilation support could not be effective in optimisation of gas-exchanges, respiration needs a support from extracorporeal membrane oxygenation, if available.

TOTALTRACK VLM®, OUR CASE SERIES: NEW SOLUTIONS FOR OLD PROBLEMS

I. Hinojal Blanco*, F.J. González Carrasco, I. Casas Vila, R. Hoffmann, M.V. Moral. *Hospital de la Santa Creu i Sant Pau, Barcelona, Spain*

* Corresponding author.

E-mail address: ihinojal@santpau.cat (I. Hinojal Blanco).

Background and goal of study. More than 30% of deaths due to anaesthetic act are related with bad ventilation. Nowadays, Macintosh Laryngoscope is the election technique in airway management. The conjunction of anatomic factors and external situations can result in the worst of the situations to the anaesthesiologist: a non-ventilable and non-intubable patient. Totaltrack VLM® is a hybrid device that combines a supraglottic device with an intubation channel, that lets ventilation and intubation at the same time, under operator view.

Material and methods. Retrospective analysis of a case series (including 96 patients) of hemodynamic response and ventilation efficiency after the use of Totaltrack VLM® in patients admitted to elective surgery. Other secondary data were analysed (see results).

Results and discussion. 67% were women and 33% men. Mean age was 64 years old. Mean BMI was 26. ASA status was 2 in 84% patients, 3 in 17%, and 1 in the rest of them. After the technique, 74% said they were satisfied, and 15% very satisfied. 5% did not find advantage using it and 6% were dissatisfied. None of them preferred MAC laryngoscopy once they were asked after using it. No incidences is the most remarkable after using Totaltrack VLM®, in 77.5% patients. Bad vision using the camera was obtained in 12.9%, and left arytenoid impact in 9.6%. None of those difficulties avoided intubation or ventilation. In any of the cases we reported an accidental extubation or tube cuff damage while removing the device. After intubation, successful ventilation after intubation was in 100% patients, with no accidental extubation after manoeuvres consisting in removing the whole device. In only one case, we needed classical laryngoscopy, and in another a guide.

Systolic and diastolic pressure and pulse oximetry were measured before inserting the device in the mouth of the patient, and 1 and 5 minutes later. This new device let us ventilate and intubate under view, with negligible hemodynamic response, and seems to be a promising option to face an old problem in airway management: the non-ventilable and non-intubable patient.

Conclusions. This retrospective analysis shows that the Totaltrack VLM® facilitates tracheal intubation while allowing adequate oxygenation and ventilation when securing an airway. However, considering the novelty of this particular device, further research is warranted to determine its usefulness in patients with known or predicted difficult airways.

Other concerns. We confirm that all authors listed have contributed to the work and support the submission of this abstract. This study analysis is based on data which belongs to patients that signed a consent about sharing it for scientist purposes, so it does not present any ethical conflict. This work has not been published or previously presented at a major meeting. The authors declare no conflicts of interest.

References

1. Hagberg CA. Benumof's airway management. 2nd ed. Philadelphia: Mosby; 2007.
2. Covarrubias-G A, Martínez-G JL, Reynada-T JL. Actualidades en la vía aérea difícil. *Rev Mex Anestesiol* 2004;27:210–8.
3. Cheney FW: The American Society of Anesthesiologists Closed Claims Project: what have we learned, how has it affected practice, and how will it