

Beatmungstherapie bei COVID-19

Leserbrief von Priv.-Doz. Dr. med. Kerstin D. Röhm zum Beitrag „Beatmungstherapie bei COVID-19 – Handlungsempfehlung der sächsischen ARDS-Zentren“ von Dr. med. Falk Fichtner et al. im „Ärzteblatt Sachsen“, Heft 1/2021, Seite 5ff.

Literatur | Antwort Prof. Dr. med. habil. Andreas Reske, Prof. Dr. med. habil. Sebastian Stehr, Priv.-Doz. Dr. med. habil. Sven Laudi, Prof. Dr. med. habil. Peter Spieth, Prof. Dr. med. habil. Stefan Hammerschmidt, Dr. med. Christian Seeber, Svenja Heyne M.Sc. Psy, Dr. med. Falk Fichtner

- [1] S3-Leitlinie Analgesie, Sedierung und Delirmanagement in der Intensivmedizin (DAS-Leitlinie 2015)
AWMF-Registernummer: 001/012
- [2] van Haren F, Pham T, Brochard L, Bellani G, Laffey J, Dres M, Fan E, Goligher EC, Heunks L, Lynch J, Wrigge H, McAuley D. Spontaneous breathing in early acute respiratory distress syndrome: insights from the large observational study to understand the global impact of severe acute respiratory failure study. *Crit Care Med.* 2019;47:229–238. doi: 10.1097/CCM.0000000000003519.
- [3] Chanques G, Conseil M, Roger C, Constantin JM, Prades A, Carr J, Muller L, Jung B, Belafia F, Cisse M, Delay JM, de Jong A, Lefrant JY, Futier E, Mercier G, Molinari N, Jaber S. Immediate interruption of sedation compared with usual sedation care in critically ill postoperative patients (SOS-Ventilation): a randomised, parallel-group clinical trial. *Lancet Respir Med.* 2017;5:795–805. doi: 10.1016/S2213-2600(17)30304-1.
- [4] Demoule A, Molinari N, Jung B, Prodanovic H, Chanques G, Matecki S, Mayaux J, Similowski T, Jaber S. Patterns of diaphragm function in critically ill patients receiving prolonged mechanical ventilation: a prospective longitudinal study. *Ann Intensive Care.* 2016;6:75.
- [5] Chanques G, Kress JP, Pohlman A, Patel S, Poston J, Jaber S, Hall JB. Impact of ventilator adjustment and sedation-analgesia practices on severe asynchrony in patients ventilated in assist-control mode. *Crit Care Med.* 2013;41:2177–2187. doi: 10.1097/CCM.0b013e31828c2d7a
- [6] National Heart, Lung, and Blood Institute PETAL Clinical Trials Network, Moss M, Huang DT, Brower RG, Ferguson ND, Ginde AA, Gong MN, Grissom CK, Gundel S, Hayden D, Hite RD, Hou PC, Hough CL, Iwashyna TJ, Khan A, Liu KD, Talmor D, Thompson BT, Ulysse CA, Yealy DM, Angus DC (2019) Early neuromuscular blockade in the acute respiratory distress syndrome. *N Engl J Med* 380:1997–2008
- [7] Jabaudon M, Boucher P, Imhoff E, Chabanne R, Faure JS, Roszyk L, Thibault S, Blondonnet R, Clairefond G, Guérin R, Perbet S, Cayot S, Godet T, Pereira B, Sapin V, Bazin JE, Futier E, Constantin JM. Sevoflurane for Sedation in Acute Respiratory Distress Syndrome. A Randomized Controlled Pilot Study. *Am J Respir Crit Care Med.* 2017 Mar 15; 195(6):792–800. doi: 10.1164/rccm.201604-0686OC. PMID: 27611637.
- [8] Heider J, Bansbach J, Kaufmann K, Heinrich S, Loop T, Kalbhenn J. Does volatile sedation with sevoflurane allow spontaneous breathing during prolonged prone positioning in intubated ARDS patients? A retrospective observational feasibility trial. *Ann Intensive Care.* 2019 Mar 25;9(1):41. doi: 10.1186/s13613-019-0517-8. PMID: 30911854; PMCID: PMC6434001.

- [9] Grasselli G, Giani M, Scaravilli V, Fumagalli B, Mariani C, Redaelli S, Lucchini A, Zanella A, Patroniti N, Pesenti A, Foti G. Volatile Sedation for Acute Respiratory Distress Syndrome Patients on Venovenous Extracorporeal Membrane Oxygenation and Ultraprotective Ventilation. *Crit Care Explor.* 2021 Jan 8;3(1):e0310. doi: 10.1097/CCE.0000000000000310. PMID: 33458679; PMCID: PMC7803679.
- [10] Bomberg H, Meiser F, Daume P, Bellgardt M, Volk T, Sessler DI, Groesdonk HV, Meiser A. Halving the Volume of AnaConDa: Evaluation of a New Small-Volume Anesthetic Reflector in a Test Lung Model. *Anesth Analg.* 2019 Aug;129(2):371-379. doi: 10.1213/ANE.0000000000003452. PMID: 29787413.
- [11] Nyrén S, Radell P, Mure M, Petersson J, Jacobsson H, Lindahl SG, Sánchez-Crespo A. Inhalation anesthesia increases V/Q regional heterogeneity during spontaneous breathing in healthy subjects. *Anesthesiology.* 2010 Dec;113(6):1370-5. doi: 10.1097/ALN.0b013e3181fc5788. PMID: 21068662.
- [12] Dunham-Snary KJ, Wu D, Sykes EA, Thakrar A, Parlow LRG, Mewburn JD, Parlow JL, Archer SL. Hypoxic Pulmonary Vasoconstriction: From Molecular Mechanisms to Medicine. *Chest.* 2017 Jan;151(1):181-192. doi: 10.1016/j.chest.2016.09.001. Epub 2016 Sep 16. PMID: 27645688; PMCID: PMC5310129.
- [13] Schwarzkopf K, Schreiber T, Bauer R, Schubert H, Preussler NP, Gaser E, Klein U, Karzai W. The effects of increasing concentrations of isoflurane and desflurane on pulmonary perfusion and systemic oxygenation during one-lung ventilation in pigs. *Anesth Analg.* 2001 Dec;93(6):1434-8, table of contents. doi: 10.1097/0000539-200112000-00017. PMID: 11726419.
- [14] Suleiman, A.; Qaswal, A.B.; Alnouti, M.; Yousef, M.; Suleiman, B.; Jarbeh, M.E.; Alshawabkeh, G.; Bsisu, I.; Santarisi, A.; Ababneh, M. Sedating Mechanically Ventilated COVID-19 Patients with Volatile Anesthetics: Insights on the Last-Minute Potential Weapons. *Sci. Pharm.* 2021, 89, 6. <https://doi.org/10.3390/scipharm8901000>
- [15] Nieuwenhuijs-Moeke GJ, Jainandunsing JS, Struys MMRF. Sevoflurane, a sigh of relief in COVID-19?. *Br J Anaesth.* 2020;125(2):118-121. doi:10.1016/j.bja.2020.04.076
- [16] Jerath, A., Ferguson, N.D. & Cuthbertson, B. Inhalational volatile-based sedation for COVID-19 pneumonia and ARDS. *Intensive Care Med* 46, 1563–1566 (2020).