

Authors' Response

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Dear Editor,

We thank Dr. Amore *et al.* for the comments [1], and suggestions that allowed us to discuss "The surgical approach of late-onset tracheoesophageal fistula in a tracheostomized COVID-19 patient", published in Monaldi Archives of Chest Disease by our group [2]. Amore *et al.* suggest an alternative surgical treatment of tracheoesophageal fistula (TEF) in mechanical ventilator-dependent patients, performing a complete cervical tracheal transection, fol-

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lowed by direct esophageal fistula repair and subsequent direct repair of the tracheal defect without resection; they treated two women with this technique, performing in both patients a tracheostomy at the end of the surgical procedure followed by placement of a permanent Montgomery T tube [3]. The authors concluded that their technique may be a viable alternative to standard treatment of TEF. We agree with them about their surgical approach; however, in our opinion, their described technique may be helpful in selected cases, as well as in mechanical ventilator-dependent patients or when the segment of trachea to resect is too long.

In our case, we scheduled a standard surgical procedure according to the Grillo technique [4], following a multidisciplinary board discussion, because the tracheostomized post-COVID-19 patient was in spontaneous breathing before surgical treatment. The patient's good pre-operative conditions allowed us to plan a standard surgical treatment of TEF without performing a post-operative tracheostomy. According to the literature, the standard procedure proposed by Grillo and validated by Mathisen [4,5], based on one of the largest cases of treated patients in the world, remains the procedure of choice for TEF repair. The advantages of the Grillo technique include excellent visual access to the fistula and a very low risk of tracheal devascularization. Therefore, they suggest that post-operative tracheostomy should be generally avoided after surgical treatment of TEF [5]; likewise, they recommend early extubation to reduce post-operative difficult-to-treat complications.

However, in our specific case, anesthesiologists were unable to wean the patient from mechanical ventilation at the end of the surgical repair of TEF. This unexpected post-operative complication, which occurred at the time of extubation in the intensive care unit, was managed by placing the orotracheal tube cuff distally to the tracheal suture, taking care to maintain low cuff pressures. The patient was extubated on post-operative day 15, fortunately without any complication and no need for tracheostomy or intratracheal devices.

In our opinion, every single case must be assessed individually by a multidisciplinary board. The Grillo technique remains the gold standard of treatment [4,5]; even though pre-operative ventilator dependence should not be considered an absolute contraindication to the surgical closure of the fistula [6], according to the Grillo procedure, other techniques can be considered in selected cases.

References

- Amore D, Rispoli M, Caterino U, et al. Comments on "The surgical approach of late-onset tracheoesophageal fistula in a tracheostomized COVID-19 patient". Monaldi Arch Chest Dis 2024;94:2731.
- Rotolo N, Cattoni M, De Maio S, et al. The surgical approach
 of late-onset tracheoesophageal fistula in a tracheostomized
 COVID-19 patient. Monaldi Arch Chest Dis 2023;93:2490.
- 3. Amore D, Casazza D, Rispoli M, et al. Acquired benign tra-





- cheoesophageal fistula: an alternative tracheoplastic technique. Ann Thorac Cardiovasc Surg 2022;28:377-80.
- 4. Grillo HC, Moncure AC, McEnany MT. Repair of inflammatory tracheoesophageal fistula. Ann Thorac Surg 1976;22:112-9.
- 5. Mathisen DJ, Grillo HC, Wain JC, et al. Management of
- acquired nonmalignant tracheoesophageal fistula. Ann Thorac Surg 1991;52:759-65.
- 6. Puma F, Vannucci J, Santoprete S, et al. Surgery and perioperative management for post-intubation tracheoesophageal fistula: case series analysis. J Thorac Dis 2017;9:278-86.