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Authors' Response

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Key words: tracheoesophageal fistula; COVID-19; tracheal resection and reconstruction; prolonged mechanical ventilation, esophageal repair.

Dear Editor,

we thank Dr. Amore and coworkers for comments [1] and suggestions that allowed us to discuss “The surgical approach of late-onset tracheoesophageal fistula (TEF) in a tracheostomized Covid-19 patient”, published on Monaldi Archives of Chest Disease by our group [2]. Amore *et al.* suggest an alternative surgical treatment of TEF in mechanical ventilator-dependent patients, performing a complete cervical tracheal transection, followed by direct esophageal fistula repair and subsequent direct repair of tracheal defect without resection; they treated two women with this technique, performing in both patients a tracheostomy at the end of 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 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 literature, the standard procedure proposed by Grillo [4] and validated by Mathisen [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 an 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 an 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 ICU, was managed placing the orotracheal tube cuff distally to the tracheal suture, taking care to maintain low cuff pressures. The patient was extubated at post-operative day 15, fortunately without any complication and no need of tracheostomy or intratracheal devices.

In our opinion, every single case must be assessed individually after multidisciplinary board. The Grillo's technique remain 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 with Grillo procedure, other techniques can be considered in selected cases.

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