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Traditional Technique in Lieu of Novel Percutaneous Tracheostomy Technique During COVID-19



To the Editor:

We read with interest the novel percutaneous tracheostomy technique described by Angel and associates.¹ Although we found their technique to be clever and thoughtful, it was not clear that it represents an advance that will truly mitigate aerosolization of secretions from COVID-19 patients undergoing percutaneous tracheostomy.

With “traditional” percutaneous tracheostomy using the Blue Rhino (Cook Medical, Bloomington, IN) dilator technique,² the system is initially opened for the inline insertion of a swivel adaptor and then a bronchoscope. The next broach of the system comes as the Blue Rhino dilator is removed and the tracheostomy placed. Each of these can be accomplished with brief (5- to 30-second) intervals with the patient in apnea, and the ventilator in standby mode. Each time, before the system is broached, a surgical hemostat briefly clamps the endotracheal tube (ETT) to reduce aerosolization.

With the novel technique, the ETT is advanced and the initial steps are conducted with the balloon inflated distal to the site of neck penetration. During the transition to tracheostomy, the ETT must be pulled back above the insertion site and the bronchoscope passed beyond the balloon. This has the potential of causing an upper airway leak that persists until the tracheostomy has been inserted at the neck. The duration of that leak may vary on a case-by-case basis. The broach at the neck during removal of the dilator and placement of the tracheostomy would not differ significantly.

With the traditional technique,² the stage is set with visual guidance for the entire procedure. With the novel technique, the procedure is interrupted midway for readjustment of ETT and bronchoscope. There is a small risk that passing the bronchoscope beyond the end of the ETT for the final steps will be problematic. For the traditional approach the bronchoscope could be held by almost any ancillary provider or trainees. For the novel approach some level of bronchoscopy skill is essential.

With procedures, any introduction of complexity can increase risk. We laud Angel and associates¹ for their ingenuity. A modification of traditional percutaneous tracheostomy insertion in which the closed system is broached briefly with apnea, in a conscious and controlled manner, still represents the simplest approach.

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recommendations from the Critical Care and Acute Care Surgery Committees of the American Association for the Surgery of Trauma. *Trauma Surg Acute Care Open.* 2020;5:e000482.

Policies Should Be Based on Data Not Dogma in Medicine and Government



Reply

To the Editor:

We appreciate the letter from Bartter and colleagues¹ in response to our article.² In general we agree with most of their points. We too have used periods of apnea as a further iteration and modification of our technique. However a subset of patients cannot tolerate even 10 to 20 seconds of apnea. Although all these maneuvers theoretically reduce viral shedding, there are no studies that currently measure the amount of shedding viral particles. That leads us to facts over theory.

No doubt the medical facts here are important, yet there is perhaps a bigger message. And this message is simple. Too many policies in both medicine and government are based on dogma and opinion and not facts. This is perhaps no more applicable or hurtful to our society than today given the current political and societal unrest that plagues much of our world. We in medicine are fortunate that our accepted cultural to promulgated laws, rules, and principals is evidence based. This is unfortunately not true for many of our federal, state, or local policies. It is the ideal time for us as leaders to help drive the change given this pandemic that requires an understanding of science, empathy, and the safe care of many.

Physicians are perhaps the most respected members of our society. We are leaders. Leaders cannot and do not remain silent, especially during a crisis.

Therefore it is incumbent on all of us to help advise our government officials as to when it is safest to reopen our community and where and how. We have shown that even a super-spreading procedure like percutaneous tracheostomy is safe for healthcare workers if they properly wear their protective equipment. Therefore our citizens should be safe during a commute to work and at work if proper social distances and proper donning of their protective equipment are used. We are the ones best suited to decide when COVID-19 antibody testing should be leveraged and what the sensible frequency of retesting patients or healthcare workers is with repeated nasal swabs. Currently far too few facts and way too much dogma are used to craft these policies. Leaders challenge dogma and pen policy that bring value to society. As physicians let's all step up and be leaders today—we have never been more needed or more suited to do so than now.

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