cartilage, an injury that can be difficult to manage should it later become symptomatic. However, we believe that if placement of the tracheostomy is too low, the dilator will enter the trachea at an oblique, rather than perpendicular, orientation, which increases the risk of tracheal ring fracture, as described. The ideal location of entry lies between the second and third tracheal rings, which can be precisely discerned using bronchoscopic guidance. It is unclear how the location of the thyroid isthmus can be reliably determined using a percutaneous technique, and bronchoscopic guidance should be routinely used to accurately determine the insertion site.

The PDT remains an excellent option for many patients requiring long-term mechanical ventilation. The continued discussion of the important technical aspects of the PDT is critical for the avoidance of its potential complications, such as corkscrew stenosis.

Jordan V. Jacobs, MD^a

David A. Hill, MD^a

Scott R. Petersen, MD^a

Ross M. Bremner, MD, PhD^b

Richard D. Sue, MD^c

Michael A. Smith, MD^b

^aDepartment of General Surgery

^bDepartment of Thoracic Surgery

^cDepartment of Pulmonary and

Critical Care Medicine

St Joseph's Hospital and Medical

Center

Phoenix, Ariz

References

1. Griggs WM, Worthley LI, Gilligan JE, Thomas PD, Myburg JA. A simple percutaneous tracheostomy technique. *Surg Gynecol Obstet.* 1990;170:543-5.
2. Ambesh SP, Pandey CK, Srivastava S, Agarwal A, Singh DK. Percutaneous tracheostomy with single dilatation technique: a prospective, randomized comparison of ciaglia blue rhino versus Griggs' guidewire dilating forceps. *Anesth Analg.* 2002;95:1739-45.
3. Anon JM, Gomez V, Escuela MP, De Paz V, Solana LF, De La Casa RM, et al. Percutaneous tracheostomy: comparison of ciaglia and Griggs techniques. *Crit Care.* 2000;4:124-8.
4. Nates JL, Cooper DJ, Myles PS, Scheinkestel CD, Tuxen DV. Percutaneous tracheostomy in

critically ill patients: a prospective, randomized comparison of two techniques. *Crit Care Med.* 2000;28:3734-9.

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CLAMP TIMES, TEACHING, AND TECHNICAL EXCELLENCE

To the Editor:

ElBardissi and colleagues¹ analyze the role of team learning curves in outcomes of coronary artery bypass surgery, concluding that the experience of the attending surgeon plays a much less important role in the speed of surgery than the number of times an attending and fellow have operated together as a team. The authors' thought-provoking analysis merits several comments.

In a teaching program with 73 fellows and 11 experienced attending surgeons, the average number of times a particular team operated together across a decade and more than 4000 cases was 10; perhaps this contributes to the finding that experience together was a much stronger predictor of the speed of surgery than time as an attending surgeon. In addition, if fellows performed most cases as the primary surgeons, the attendings' experience would be even less likely to emerge as a dominant factor in operative speed.

The authors' choice of operative speed as the primary end point, rather than clinical outcomes, is an interesting one. How did the authors account for variation in anatomy, technique, or other personnel? A further challenge presented by speed as a primary outcome is that either extreme may be associated with worse clinical performance: in a cumulative sum analysis of 8 surgeons' learning curves for coronary bypass grafting, a causal association was observed between unacceptable mortality and morbidity rates and the quickest surgeon in a cohort.² ElBardissi and colleagues¹ conclude that the lack of

correlation between attending experience and speed shows that attendings "fail to make significant improvements over the course of their career." Is it not more likely that these attending surgeons continued to become even more proficient with time—teaching more and achieving excellent technical and clinical outcomes more often, despite increasingly challenging cases?

We agree with the authors that greater team experience contributes to excellent patient outcomes and resident education. We suspect this is particularly true for residents in the 6-year integrated residency programs: these trainees perform selected cases as the primary surgeon during their first and second year out of medical school most safely and successfully if they have already built up solid operative experience with the specific attending surgeons. An analysis using a similar method to that of ElBardissi and colleagues,¹ using adverse clinical events as end points, like the accompanying article in the same issue³ or the study by Holzney and colleagues,² could provide valuable lessons for clinical practice and surgical education in this era of increasingly streamlined training.

Aaron Josef Weiss, MD

Paul Stelzer, MD

Joanna Chikwe, MD

Department of Cardiothoracic Surgery

Mount Sinai Medical Center

New York, NY

References

1. ElBardissi AW, Duclos A, Rawn JD, Orgill DP, Carty MJ. Cumulative team experience matters more than individual surgeon experience in cardiac surgery. *J Thorac Cardiovasc Surg.* 2013;145:328-33.
2. Holzney DM, Jacobs S, Walther T, Mochalski M, Mohr FW, Falk V. Cumulative sum failure analysis for eight surgeons performing minimally invasive direct coronary artery bypass. *J Thorac Cardiovasc Surg.* 2007;134:663-9.
3. Saxena A, Dinh D, Smith JA, Reid CM, Shardey GC, Newcomb AE. Excellent short- and long-term outcomes after concomitant aortic valve replacement and coronary artery bypass grafting performed by surgeons in training. *J Thorac Cardiovasc Surg.* 2013;145:334-40.

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