In the first 12 weeks, there were 30 unique PERT activations. Most (17, 57%) originated in the ED, seven (23%) in ICUs, and six (20%) in inpatient hospital units. Twenty-five activations (83%) were for confirmed PE and five (17%) for unstable patients with suspected PE. Median elapsed time from the initial activation to the multidisciplinary online meeting was 54 min (25%-75%; 52-72 min). Data collection was approved by the Human Research Committee of Partners Healthcare (2012P002257).

The mean age of patients was 57 ± 17 years, and 19 (63%) were men (Table 1). Seven of 25 confirmed PEs (28%) were saddle and eight (32%) involved a main pulmonary artery. Twenty patients (80%) had right-sided heart strain. After consultation, the PERT considered 18 PEs (72%) submassive and two (8%) massive (Fig 1). Two patients (8%) were treated with thrombolysis. Two patients (8%) were treated with CDT and an IVC filter; one patient with massive PE had an absolute contraindication to anticoagulation, CDT = catheter-directed thrombolysis; IVC = inferior vena cava; PE = pulmonary embolism; PERT = Pulmonary Embolism Response Team.

To the authors’ knowledge, the PERT at Massachusetts General Hospital is the first such team in the country. Our initial experience suggests that an innovative, multidisciplinary PERT can streamline the care of patients with severe PE and that there is high demand for this approach.

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References


Speech and Mechanical Ventilation

To the Editor:

We read with interest the recent CHEST article by Garguilo et al (May 2013) about speech in patients with tracheostomy and mechanical ventilation (TMV) support being facilitated by simultaneously using two devices to permit essentially continuous speech. In 1990, we reported on 104 users with TMV (82 of whom had neuromuscular diseases [NMDs] and were continuously TMV dependent) who spoke by using cuffless tubes or tubes with deflated cuffs. Nineteen had Duchenne muscular dystrophy. Most of them had the exhalation valves of their active ventilator circuits capped for continuous speech; this is a simpler and less expensive method for continuous speech during TMV, without requiring additional devices or causing dyspnea or hypercapnia from slight rebreathing. Indeed, most of the patients were chronically hypopnic from long-term TMV. Passy-Muir valves also accomplish the same thing and are simpler and cheaper than the proposed positive end expiratory pressure (PEEP), but neither these valves nor capping were discussed by Garguilo et al.

Thirty-four of the 104 users with TMV from our study were among the 69 decannulated to continuous noninvasive ventilatory support (CNVS) who preferred it to TMV for convenience, speech, swallowing, appearance, comfort, and safety unanimously overall; none underwent tracheotomy a second time. After successfully extubating all “unweanable” patients with NMD other than those with amyotrophic lateral sclerosis, we no longer consider tracheotomy for any NMDs other than amyotrophic lateral sclerosis. Over 760 further users on CNVS have been reported from 18 centers. Thus, none of the 12 patients reported by Garguilo et al would have undergone tracheotomy by our center, and all would have been able to speak well without PEEP. Indeed, only one-half of their 12 patients were continuously TMV dependent, despite having had tracheostomies for an average of >13 years. Because long-term survival is possible by both TMV and CNVS (albeit at a mean 10 years longer for Duchenne muscular dystrophy with fewer hospitalizations and pneumonias by CNVS), TMV should...
be avoided in these conditions, thereby rendering moot any need to consider PEEP for speech.6

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Response

To the Editor:

We thank Drs Bach and Esquinas for their interest in our study, which aimed to seek alternate ways to improve speech in patients with tracheostomy and mechanical ventilation support.1 The purpose was not to address tracheostomy indications, which remain a controversial subject. As advocates of noninvasive ventilation techniques, Dr Bach and coworkers have largely contributed to their development and encouraged their extensive use; we do not challenge noninvasive ventilation as the first-line treatment of neuromuscular respiratory failure. However, the choice of ventilation modalities is not a simple one and depends on many factors, such as efficiency, patient’s tolerance, teams’ experience in the different ventilation techniques, patients’ environment, health-care systems, and also, above all, each patient’s opinion. Invasive ventilation through tracheostomy may be required during a patient’s history either transitorily or permanently, depending on these many factors, and its use remains widely different among countries.2,4 Providing the best care for all patients also includes seeking to improve the management of patients with tracheostomy, which, therefore, remains an important topic.

As tracheostomy remains a treatment option in our country (France), our experience has allowed us to reassess the effects of tracheostomy and, contrary to Dr Bach’s 20-year-old experience on the long-term effects of tracheostomy,3 we have shown that, thanks to the improvement of medical-care techniques, sleep5 and swallowing6 performances improve with the use of invasive ventilation. Likewise, speech and communication may be improved by appropriate adjustment of ventilator settings.7,8 We did not discuss the occlusion of the ventilator expiratory circuit (whether through the use of a one-way phonation valve or the capping of the expiratory line) as we have previously compared the use of a phonation valve vs positive end-expiratory pressure as techniques to improve speech in patients with tracheostomy and mechanical ventilation support.9,10 We showed that they provided equivalent efficiency in improving phonation while presenting different inconveniences. For instance, phonation valve use in a patient with tracheostomy and mechanical ventilation support, as well as capping the expiratory line of the ventilator, imposes a complete expiration through the upper airways that some patients do not tolerate over time. Interestingly, when given the choice, only two among the 10 patients studied preferred the use of a speaking valve over positive end-expiratory pressure. It is, therefore, important to remain interested in alternative methods to improve patients under mechanical ventilation as experience shows that one solution rarely fits them all.

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