Percutaneous dilatational tracheostomy

Background

Physicians are now able to open an airway in the trachea by controlled percutaneous introduction of tracheostomy tubes. Elective percutaneous dilatational tracheostomy (PDT) is the gradual dilation of the tracheal entrance site made by sequentially sized dilators being placed over a wire guide, or guiding catheter system. The tracheostomy tube is then fitted over the appropriately sized dilator.

First used in 1985, PDT is not recommended for emergency tube placement, children, and those patients with enlarged thyroids. The technique has been demonstrated to result in the desired clinical outcome at no substantial risk to patients. Pulmonary chest physicians and internists argue that PDT represents a direct extension of their existing skills. But surgeons counter that PDT is an invasive procedure that may result in complications, thus requiring special training and experience.

The following are the types of specialist who have shown an interest in PDT: Otolaryngologists (ENTs), general or cardiothoracic surgeons, internists, and pulmonary chest physicians.

The American College of Surgeons, the Society of Internal Medicine, the American College of Chest Physicians, the American Thoracic Society, and the American Academy of Otolaryngology recommend the granting of clinical privileges based upon the evaluation of education, training, experience, and demonstrated current competence.

According to Rodney C. Richie, MD, pulmonologist at Hillcrest Baptist Medical Center in Waco, TX, those in pulmonary medicine see PDT as simply a combination of procedures for which they are already well-trained. “It involves nothing more than combining fiber-optic bronchoscopy, which we do all the time, with a transtracheal needle stick, which we have done for years with transtracheal aspiration and more recently, the introduction of Scoop and ITOC catheters,” Richie says.

For Hillcrest, the decision thus far has been not to subject those physicians who want to perform PDT to the privilege delineation process.
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Ciaglia dilation percutaneous tracheostomy sets are manufactured by Cook Critical Care, Bloomington, IN. According to Bruce Gingles, Cook's director of sales and marketing, manufacturers should avoid involvement in medical credentialing. Gingles did say that thorough knowledge of the anatomy, as well as experience and understanding of the Seldinger or guide-wire technique are important qualifications to performing PDT.

CRC draft criteria

Basic education: MD or DO

Minimal formal training: Completion of an approved postgraduate residency program in general surgery, otolaryngology, cardiothoracic surgery, pulmonary medicine, or internal medicine that included, as a portion of training and education, direct experience in PDT.

Or, if training in PDT was not part of the physician's speciality or subspecialty training, the applicant must demonstrate participation in at least one CME course addressing the technical, cognitive, and mechanical aspects of the procedure and exposing the student to potential complications. (If the applicant is a non-surgeon, he or she must demonstrate participation as an assistant or as a preceptee in conjunction with a physician of proven documented experience in PDT and/or tracheostomy.)

Or, the applicant must have prior experience in the performance of conventional tracheostomies or must demonstrate significant prior experience in the Seldinger or guide-wire technique.

Considerations

PDT may be added to the core privileges currently held by ENTs and general or cardiothoracic surgeons.

The first three (or more, if necessary) PDTs performed by a physician trained in pulmonary medicine or an internist should be observed by a fully-trained surgeon or an internist or physician trained in pulmonary medicine who has performed at least 15 such procedures.