

Editor's Note: Authors are invited to respond to Correspondence that cites their previously published work. Those responses appear after the related letter. In cases where there is no response, the author of the original article declined to respond or did not reply to our invitation.

Therapeutic Bronchoscopy “Can” Does Not Necessarily Mean “Should”

To the Editor:

We read with interest the report by Ost et al¹ on behalf of the American College of Chest Physicians Quality Improvement Registry, Evaluation, and Education (AQuIRE) Bronchoscopy Registry in *CHEST* (May 2015). The authors meticulously summarize data from 15 leading medical centers in North America and the United Kingdom on bronchoscopic interventions to treat malignant obstruction of central airways.¹ Registries allow clinicians to learn from the pooled experience of others. The practitioner must then adapt this experience to his or her local environment (eg, operator skills, available equipment, and reimbursement).

The primary outcome in this report was defined as technical success (> 50% patency), which was achieved in 93% of interventions. Notably, even in lobar bronchial obstructions (which many would not consider to be “central airways”), the success rate was 92%.

Two strategies were used: ablative techniques and stent placement. In a total of 1,115 procedures, 1,836 individual treatment modalities were used—an average of 1.6 modalities per procedure. It is unclear which combinations of modalities were used and why. While stent placement is the only bronchoscopic intervention available for extraluminal obstruction, for intraluminal and mixed obstruction, the best strategy is less clear.² Is technical success with ablative therapy enough, or should ablation be followed by stent deployment to maintain patency? Unfortunately, the current report does not answer this question.

The secondary outcomes were dyspnea (Borg score) and health-related quality of life (assessed by the Short Form-6D). In these procedures, which probably have little effect on survival, palliation is the central goal. The authors report an improvement of dyspnea and health-related quality of life in 42% and 48% of cases, respectively. A high baseline dyspnea score predicted a better response to therapy. Unfortunately, data regarding these critical

outcomes were available for only about 20% of subjects. The 30-day mortality rate was a sobering 14.8%.

The sensation of impending suffocation suffered by these patients is terrifying, and every effort must be made to alleviate it. Technologic developments in interventional pulmonology enable us to perform an array of interventions in patients with malignant central airway obstruction.³ This report shows that the technical success rate is high, but palliation is achieved in less than one-half of interventions. Thus “can do” does not necessarily mean “should do.”

Our own approach is this: Palliate dyspnea caused by malignant airway obstruction, using the single procedure for which you have the skills and the facilities, as soon as possible. *Primum non nocere* should be weighed against the poor prognosis of these patients and modest success in achieving palliation.

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Response

To the Editor:

I thank Drs Shulimzon and Segel for their thoughtful review and comments on our article in *CHEST*,¹ which

provides data from the American College of Chest Physicians Quality Improvement Registry, Evaluation, and Education (AQuIRE) program on technical success rates of therapeutic bronchoscopy in patients with malignant central airway obstruction. There is an accompanying article that provides data on complications for these same patients.²

Drs Shulimzon and Segel correctly point out that in the 1,115 procedures, 1,836 different treatment modalities were used. In this case, treatment modalities refer to any stent, dilation, or ablative procedure. Ablative refers to the use of modalities that destroy tissue, so, in this case, it is the use of electrocautery, argon plasma coagulation, laser, or cryotherapy. It is probably best to assess the cohort by considering ablation and stenting separately, since ablation techniques can be used somewhat interchangeably to deal with certain problems (eg, electrocautery or laser can either be used for an endobronchial lesion), but an ablation technique cannot be used as a substitute for stenting in certain cases (eg, extrinsic compression). A total of 982 ablative techniques were used in 879 procedures (79%), so, on average, 1.12 different ablative techniques were used per procedure. Stents were used in 406 procedures (36%). Not all institutions had access to every ablative technique, and not all centers performed rigid bronchoscopy. Therefore, the reason why a particular modality was chosen over another in a given case cannot be determined, and, in some cases, there was probably no choice. However, we did not find evidence that the type of ablative method used impacted outcome.

Whether patients who undergo ablation should have stenting afterward cannot be answered by this type of study. Patients with symptomatic malignant central airway obstruction > 50% purely due to extrinsic compression are good candidates for stenting. The more difficult question is whether patients with mixed disease or extensive mucosal involvement should have stenting after ablation. If ablation is completely unsuccessful, such that reopening of the airway cannot be achieved without a stent, then the benefits of stenting probably warrant the risks. However, in those patients who have significant reopening after ablation, the benefits and harms of stenting vs not stenting are less clear, and a more

conservative strategy may be warranted. We agree that in such cases, physicians need to weigh the potential for symptomatic benefits¹ vs the potential harms.²⁻⁵ Importantly, both short-term and long-term benefits and risks need to be considered, and this study only has data out to 30 days. Future studies will need to quantify the long-term impact of therapeutic bronchoscopy on health-related quality of life, as well as the long-term complications.

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