The options available to treat pediatric airway obstruction include surgical resection and anastomosis (including slide tracheoplasty), silicone (eg, Dumon) stents, Montgomery T-tubes, and SEMS. Recently, there has been a disturbing trend of using SEMS as the first option in treating benign tracheobronchial pathology, primarily because of the ease of deployment and the dramatic relief of obstruction in the short term.² We feel that it needs to be reiterated strongly that SEMS should remain the last resort in patients with benign stenosis or those with a surgically correctable airway obstruction. SEMS have a number of complications that are difficult to treat long-term. The ideal indication for SEMS is a patient with terminal malignancy with airway obstruction in whom the expected low survival from the primary malignancy precludes the occurrence of stent-related complications. SEMS cause intense granulation tissue, which often causes the same symptoms for which the stent was deployed; subsequent attempts to alleviate this problem with laser, electrocautery, and so on usually have disappointing results. Moreover, contrary to the authors' views, removal of these stents is difficult and fraught with danger. Single and short-segment tracheal stenosis should be treated by primary surgery in centers experienced in pediatric tracheal surgery. Stenting should be reserved for patients in an acute situation (where silicone stents may be deployed as a temporary measure) before referral to a center specializing in tracheal surgery.

Although not practical in infants and very small children, Dumon stents and Montgomery T-tubes are invaluable in stenting lesions that are too long for safe reconstruction.³ More often than not, the stent stabilizes the airway, and decannulation is possible in most cases.⁴ Moreover, the ease with which silicon stents can be removed if definitive surgery is being considered makes it an attractive option to tide over an acute situation. The pediatrician, pulmonologist, or thoracic surgeon involved in managing complex airway problems needs to be aware of the basic underlying pathology and intelligently apply the right solution to a specific problem.

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Reply to the Editor:

In my article I emphasized that the use of intratracheal stents in children is dangerous and carries the risk of severe complications.

With regard to the use of self-expandable metallic stents (SEMS), I completely agree that their use should be avoided. There are enough data in the literature to support this.¹ The SEMS in this study were made from nitinol, an alloy with a "shape memory effect." In animal studies, this stent, because of its unique biochemical property, could be fixed and removed easily, even in very small airways.² In children, their use was associated with an excessive granulation, and although the extraction proved to be easy and smooth, their application is currently suspended.

Currently available silicone or Dumon stents have an external diameter that prevents their use in infants and small children.

The Montgomery and I-tubes could be an option in tracheal strictures, but they are not practical in bronchial or distal airway problems.

I would like to thank Mr Pramesh for his remarks.

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Molecular changes occurring with aneurysm formation: Possible impact of sampling error

To the Editor:

We congratulate Cotrufo and colleagues¹ for exploring messenger RNA expression and extracellular matrix protein content in the ascending aorta associated with bicuspid aortic valves (BAVs), with particular attention to differences between the inner and outer curvatures. Our laboratory is also exploring the molecular changes occurring with aneurysm formation, and we have been concerned about the potential impact of sampling error on experimental results.

Cotrufo and colleagues¹ demonstrated differences in levels of collagens I, III, and IV, as well as fibronectin and laminin protein, by western blot analysis when comparing samples taken from the concave and convex portions of dilated aortas resected from patients with BAV. Additionally, they reported differences between patients with functionally regurgitant versus stenotic valves. Importantly, Cotrufo and colleagues¹ also reported significant differences in protein levels between dilated aortas (regardless of functional valve pathology) and normal control aortas. Indeed, these differences were as striking as those observed between concavity and convexity or between stenotic and regurgitant specimens.

We too are intrigued by the observations made on aneurysmal tissues, but we urge caution in interpreting the comparisons made between dilated aortas and the control group. A marked difference in age may have profoundly impacted results. Cotrufo and colleagues¹ reported mean ages for the regurgitation, stenosis, and control groups as 56 ± 9 , 59 ± 12 , and 33 ± 8 years, respectively. The 95% confidence intervals for these groups (from data provided in the article's on-line Table E1¹) were 51.2-61.4, 50.9-66.4, and 24.6-41.4 years, respectively. The difference in collagen expression led Cotrufo and colleagues¹ to conclude that "collagen degradation by proteinases could prevail over collagen synthesis" and that smooth muscle cells "could react differently to different types and degrees of mechanical stress and could favor, in turn, a predominant production of either ECM [extracellular matrix] proteins or proteolytic enzymes." An alternative hypothesis