FIGURE 1. Chest roentgenogram showing the endotracheal tube below the diaphragm and mediastinal emphysema.

infants; thus we elected to conservatively manage this severe neonatal tracheal injury. If instability had persisted, several more aggressive management options were considered, including selective main stem intubation with a 2.0-mm endotracheal tube (or small chest tube) or surgical repair via sternotomy/thoracotomy with or without cardiopulmonary bypass.

Based on the short-term outcome of this neonate, we concur and extend the conclusions of Denlinger and colleagues¹ that the degree of membranous or cartilaginous posterior tracheal injury in neonates does not mandate surgical repair if there is clinical stability. Furthermore, we emphasize the known importance of low-pressure and spontaneous ventilation if possible when tracheal injuries are present.

Similarly, close follow-up will be necessary to ensure that granulation tissue does not lead to stricture formation and that tracheoesophageal fistulas do not develop.

Christopher W. Baird, MD
Larry T. Watts, MD
Karen J. Lessaris, MD
Levine Children's Hospital
Carolina's Healthcare System
Charlotte, NC

References

1. Denlinger CE, Veeramachaneni N, Krupnick AS, Patterson GA, Kreisel D. Nonoperative management of large tracheal injuries. *J Thorac Cardiovasc Surg.* 2008;136:782-3, 783.e1.
2. Gómez-Caro A, Ausín P, Moradiellos FJ, Díaz-Hellín V, Larrú E, Pérez JA, de Nicolás JL. Role of conservative medical management of tracheobronchial injuries. *J Trauma.* 2006;61:1426-34. discussion 1434-5.

doi:10.1016/j.jtcvs.2008.10.053

Reply to the Editor:

We were interested to learn that the indications for nonoperative management of large tracheal lacerations can be safely extrapolated to the pediatric population, and even to premature neonatal patients, as noted by Dr Baird and colleagues. Not only was this treatment strategy tolerated by the patient but, also, the large tracheal defect has apparently healed well without evidence of early stenosis. Longer-term follow-up will determine whether tracheal strictures will develop. Notably, the airway injury in this neonate involved both membranous and cartilaginous portions. It is generally believed that cartilaginous injuries in adults are less likely to be successfully managed without operative intervention. Perhaps further experience will lead us to an understanding that anterior tracheal injuries in the adult population can also heal without surgical intervention as long as the patient is able to ventilate and remains clinically stable.

Chadrick E. Denlinger, MD
Daniel Kreisel, MD, PhD
Department of Surgery
Washington University in St Louis
St Louis, Mo

doi:10.1016/j.jtcvs.2008.12.006

PREOPERATIVE CORONARY STUDY IN PATIENTS WITH ACUTE AORTIC DISSECTION AND ENDOCARDITIS

To the Editor:

We read with interest the recent article of Kilian and coworkers¹ on intraoperative coronary angiography in patients with acute aortic dissection and endocarditis. We congratulate the authors. This technique, presented in the past by other groups and used now by the authors on 7 patients, is fascinating; however, we believe a few more points should be addressed.

The authors treated 2 patients with acute aortic dissection and 5 patients

with aortic endocarditis with vegetations. In the aim to reduce risk of further trauma in the dissected aorta, or risk of embolization in the case of endocarditis, and to avoid further delay, the patients had cardiac surgery without previous coronary angiography or other coronary imaging procedures. During aortic crossclamp, the authors performed coronary angiogram by injection of contrast medium into the coronary tree. One patient with endocarditis (a 45-year-old man) had severe coronary lesions and was successfully treated by a venous bypass on the left anterior descending coronary artery. One patient having aortic dissection, who had progression of the dissection on the left main stem, had revascularization too.

Now, the first point is: Should we consider aortic valve endocarditis at the same level of emergency in terms of time allowed for further diagnostic imaging, such as aortic dissection? The authors do not describe any episode of previous embolism in those patients, nor hemodynamic instability, which could explain the reason for no further imaging test so as to not delay the operation.

The second point to address is: Diagnosis of coronary disease was done during cardioplegic ischemic cardiac arrest. Probably this influenced the decision to use a venous graft and not the internal thoracic artery, so as to not prolong crossclamp time.

In our institution, at present, all patients with aortic dissection and patients with aortic valve endocarditis are assessed by dual source (64 × 2) coronary multidetector computed tomography (MDCT) scan. This is fast and may be considered an alternative to invasive preoperative study.

The quantification of coronary artery calcium (CAC) is a marker for atherosclerosis. The extent of CAC correlates with the magnitude of atherosclerotic plaque burden and with subsequent coronary events.² Nowadays, there are many cardiology reports on the use of MDCT scan as

a screening tool to exclude critical coronary disease in different clinical settings, even in the Emergency Department in patients with chest pain of suspected coronary etiology.³ Recent reports on preoperative computed tomographic coronary angiography in patients referred for cardiac valve surgery showed a good accuracy to exclude relevant coronary stenosis,⁴ with a sensitivity up to 96%, specificity of 87%, positive predictive value of 61%, and negative predictive value of 99% for the detection of significant lesions ($\geq 50\%$ diameter stenosis). An overestimation of mild lesions is the main reason for false-positive results. Usually, this limitation of computed tomographic scan is represented by an overestimation of stenosis, especially in the presence of calcifications. The specificity and sensitivity, especially in the exclusion of significant lesions, may be of help before cardiac surgery.

Salvatore Lentini, MD
Fabrizio Tancredi, MD
Roberto Gaeta, MD
Cardiac Surgery Unit
Policlinic Hospital
University of Messina
Messina, Italy

References

1. Kilian E, Beiras-Fernandez A, Bauerfeind D, Reichart B, Lamm P. Intraoperative coronary angiography in the management of patients with acute aortic dissection and endocarditis. *J Thorac Cardiovasc Surg.* 2008;136:792-3.
2. Raggi P, Callister TQ, Cooil B, He ZX, Lippolis NJ, Russo DJ, et al. Identification of patients at increased risk of first unheralded acute myocardial infarction by electron-beam computed tomography. *Circulation.* 2000;101:850-5.
3. Rubinshtein R, Halon DA, Gaspar T, Jaffe R, Karkabi B, Flugelman MY, et al. Usefulness of 64-slice cardiac computed tomographic angiography for diagnosing acute coronary syndromes and predicting clinical outcome in emergency department patients with chest pain of uncertain origin. *Circulation.* 2007;115:1762-8.
4. Heuschmid M, Burgstahler C, Reimann A, Brodoefel H, Mysal I, Haerberle E, et al. Usefulness of noninvasive cardiac imaging using dual-source computed tomography in an unselected population with high prevalence of coronary artery disease. *Am J Cardiol.* 2007;100:587-92.

doi:10.1016/j.jtcvs.2008.11.055

Reply to the Editor:

We thank Lentini and colleagues for their interest in our recent article "Intraoperative coronary angiography in the management of patients with acute aortic dissection and endocarditis."¹ The 2 important issues highlighted by the authors in their Letter to the Editor reinforce important concepts from our article. The first issue is the level of emergency of aortic endocarditis. In our opinion, the indications to use intraoperative coronary angiography for acute endocarditis or for aortic dissection should be differentiated. Early surgical intervention is mandatory for patients with type A aortic dissection, as the authors note in their letter. However, in patients with acute endocarditis, the time-sparing effect does not stay in the foreground. Shamsham and colleagues² described cases of infective coronary embolism after diagnostic preoperative coronary angiography. Our aim was to prevent possible complications by means of intraoperative coronary angiography. The decision not to use multidetector computed tomography (MDCT) in this kind of patient is also related to the reduced hemodynamic and renal function and to minimize the amount of nephrotoxic contrast medium, which is 10- to 15-fold higher in MDCT than in coronary angiography, as stated in our article.¹ When patients are admitted to our hospital primarily without clear diagnostics, we also perform MDCT following a chest pain protocol,³ which in addition to the aortic depiction also includes the coronary status. We believe that preoperative coronary angiography should generally be avoided for both diagnoses, and as the authors propose, imaging methods like MDCT have to be considered. However, in most cases, the patients arrive at our department with a computed tomographic scan performed elsewhere, with no option for depiction of the coronary vessels. In these cases, we must do a second computed tomography, which incurs