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3. Nazari S, Trazzi R, Moncalvo F, et al. A new method for separate lung ventilation. J THORAC CARDIOVASC SURG 1988;95:133-8.
4. Trazzi R, Nazari S. Clinical experience with a new right sided endobronchial tube in left main bronchus surgery. J Cardiothorac Anaesth 1989;3:461-4.

12/8/59955

Reply to the Editor:

I appreciate the research into the area of bronchial blockade done by Drs. Fontana and Nazari. When I first began to design the Univent tube (Fuji Systems Corporation, Tokyo, Japan), my objectives were to create an endobronchial tube that was easy to place by clinicians not used to such procedures, a device that could ventilate the patient's lungs adequately without adding to gas flow resistance, and a device that could easily support the use of a fiberoptic bronchoscope. I believe the Univent tube has achieved these goals.

My original letter to the Editor[1] explained to surgeons the various ways the Univent tube could make life (in the operating room) easier for them.

The types of cases Drs. Fontana and Nazari describe are not easy, especially when using a new and perhaps unfamiliar device. For these reasons I did not indicate the use of Univent tubes for tracheal, carinal, or main-stem bronchial resections. I have anecdotal reports of these cases being performed with the bronchial lumen of the Univent tube being used as a "jet stylet," ventilating the nonsurgical lung by means of high-frequency jet ventilation with the blocker cuff deflated to allow for escaping gases. These cases were performed by anesthesiologists and surgeons well versed in the use of the Univent tube and advanced surgical ventilation techniques.

For the Univent tube to be used properly, as with all medical devices, it is wise to start on the easier and more routine cases to gain experience. The Univent tube will accept standard-sized fiberoptic bronchoscopes for visualization and placement of the bronchial blocker. If the instruction manual is followed, right-sided placement of the blocker is safe and simple to perform.

I designed the Univent tube to simplify the concept of the endotracheal tube and balloon occlusion catheter technique for lung separation. The tube described by Drs. Fontana and Nazari seems to reintroduce the difficulties of Fogarty catheters for the surgeon/anesthesiologist.

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REFERENCE

1. Inoue H. Univent endotracheal tube: twelve-year experience [Letter]. J THORAC CARDIOVASC SURG 1994; 107:1171-2.

12/8/61688

Aprotinin and vein graft occlusion after coronary artery bypass

To the Editor:

We were interested to read the article by Havel and colleagues (J THORAC CARDIOVASC SURG 1994;107:807-10), which concluded that aprotinin significantly reduced postoperative bleeding without influencing early vein graft patency in a series of 45 patients undergoing coronary artery bypass. The number of patients in this study is inadequate, however, to make any conclusion regarding the effect aprotinin may have on the early patency of coronary vein grafts.

The most appropriate method of statistical analysis of data concerning vein graft patency has frequently been debated, but it seems clear that comparison of vein graft patency rates by distal anastomoses alone is inadequate. Many factors may influence early graft occlusion, and recent studies that have compared the patency and occlusion of distal anastomoses *within* patients have shown that these are dependent events.[1] It is therefore important when investigating the effect of a single variable on vein graft patency that a comparison be made of the *proportion* of patients with at least one occluded graft. This important point has been made previously, emphasizing the fact that individual grafts within a patient are unlikely to behave independently.[2] Taking this into account, we have calculated that assuming 25% of patients in the control group would have one occluded graft or more (from pooled data), 290 patients per treatment group would be required for a 50% reduction in the risk of occlusion to be detected, specifying an alpha error of 5% (two-sided) and a beta error of 10%. This is in keeping with the statistical estimates of some of the recently published trials regarding the effect of antiplatelet agents on vein graft occlusion.[3, 4]

Another article published recently addressing the issue of aprotinin and vein graft patency found no difference in patency rates between treatment and control groups (as assessed by ultrafast computed tomography) but concluded that despite randomizing 216 patients, the numbers were too small to make firm statistical conclusions.[5] The comparison of occlusion rates in 15 patients per treatment group as performed by Havel and associates is therefore inappropriate. Larger trials will have to be performed before we can be convinced of their conclusion.

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REFERENCES

1. Sanz G, Pajaron A, Alegria E, et al. Prevention of early aortocoronary bypass occlusion by low-dose aspirin and dipyridamole. Circulation 1990;82:765-73.
2. Henderson WG, Moritz T, Goldman S, et al. The statistical analysis of graft patency data in a clinical trial

of antiplatelet agents following coronary artery bypass grafting. Controlled Clin Trials 1988;9:189-205.
3. Rajah SM, Nair U, Rees M, et al. Effects of antiplatelet therapy with indobufen or aspirin-dipyridamole on graft patency one year after coronary artery bypass grafting. J THORAC CARDIOVASC SURG 1994;107:1146-53.
4. Van der Meer J, Hillege HL, Kootstra GJ, et al. Prevention of one-year vein-graft occlusion after aortocoronary-bypass surgery: a comparison of low-dose aspirin, low-dose aspirin plus dipyridamole, and oral anticoagulants. Lancet 1993;342:257-64.
5. Lemmer JH, Stanford W, Bonney SL, et al. Aprotinin for coronary bypass operations: efficacy, safety, and influence on early saphenous vein graft patency. J THORAC CARDIOVASC SURG 1994;107:543-53.

12/8/59361

Supernumerary heart valves

To the Editor:

The report by Barbero-Marcial and associates[1] on the surgical treatment of congenital mitral stenosis is a significant contribution. Their patient 7, showing an accessory or supernumerary valve that should not be confused with any type of double-orifice mitral valve, is of special interest. My colleagues and I[2] reported the pathologic description of a similar anomaly some years ago; in our case, imperforate Ebstein's anomaly of the tricuspid valve was present, and the supernumerary valve was hypoplastic and connected a chamber situated posterior to the left atrium, which could be a part of the coronary sinus, with the left ventricle. As in the case reported by Barbero-Marcial and coworkers, our case showed a single papillary muscle that received all the chordae tendineae of the supernumerary valve and was covered by the posterior leaflet of the left atrioventricular valve. Diagnosis in our case might also have been made through a left ventriculotomy, if the anomaly had been at all suspected. Resection of the atrial wall, as done in the case of Barbero-Marcial, would have produced a communication of the coronary sinus and the right atrium with the left atrium, although of relatively small size. Closure of this communication would have been necessary to achieve complete correction.

Supernumerary valves are exceptional anomalies, thus far of mainly pathologic interest, that can be found in different locations.[1-4] Premortem diagnosis is difficult, knowledge of the existence of these anomalies being the first requisite for diagnosis. Abnormal recesses in the atria and coronary sinus and bizarre communications between chambers should stimulate a search for supernumerary valves. Some of them, as very nicely shown by Barbero-Marcial and associates, could be physiologically useful after repair. Recognition and treatment of these anomalies would have been almost impossible without opening the left ventricle, and this reinforces the value of the report by Barbero-Marcial's group.

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REFERENCES
1. Barbero-Marcial M, Riso A, DeAlbuquerque AT, Atik E, Jatene A. Left ventricular apical approach for the surgical treatment of congenital mitral stenosis. J THORAC CARDIOVASC SURG 1993;106:105-10.
2. Otero-Coto E, Quero M, Deverall PB. Rare anomalies of atrioventricular connection: hidden or supernumerary valves with imperforate right atrioventricular connection. Int J Cardiol 1984;6:149-56.
3. Otero-Coto E, Wilkinson JL, Dickinson DF, Rufilanchas JJ, Márquez J. Gross distortion of atrioventricular and ventriculo-arterial relations associated with left juxtaposition of atrial appendages: bizarre form of atrioventricular criss-cross. Br Heart J 1979;41:486-92.
4. Gerlis LM, Anderson RH, Dickinson DF. Duplication of the left atrioventricular valve in double inlet left ventricle: A triple inlet ventricle? Int J Cardiol 1984;6:157-61.

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Reply to the Editor

We appreciate the comments by Dr. Otero-Coto regarding our article "Left Ventricular Apical Approach for the Surgical Treatment of Congenital Mitral Stenosis." This technique had been used since 1987 in our institution to treat complex types of mitral stenosis such as parachute mitral valve. The removal of the obstruction starts from below; the papillary muscle is split, and the chorda is divided, resected, or fenestrated. After good visualization of the chordal insertion in the ventricular aspect of the mitral valve, the commissurotomies are made.

The patient who prompted the comments by Dr. Otero-Coto had a double mitral apparatus with independent mitral anuli. One hypoplastic mitral valve in the medial position had a supravalvular ring and joined the atrium to the left ventricle, ending in a single papillary muscle. The other mitral valve in the lateral position was parachute shaped and less hypoplastic, but was not connected to the left atrium. A true atrial wall separated this valve from the left atrium. Dr. Otero-Coto's patient had a similar anomaly with imperforate Ebstein's anomaly of the tricuspid valve. The tricuspid valve was the supernumerary valve, hypoplastic and related posteriorly to the coronary sinus.

The risk of producing a communication between of the coronary sinus and the right atrium after the resection of the true atrial wall was not confirmed in our case because there was no close relation between this supernumerary valve and the coronary sinus. This could be because of its predominantly lateral position instead of posterior position. Overall, we agree with Dr. Otero-Coto that the resection of atrial wall could, in some cases, produce a communication between the coronary sinus and the right atrium.

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