LETTERS TO THE EDITOR

Bidirectional inferior vena cava–pulmonary artery shunt

To the Editor:

It is always interesting to me to see how a new idea has its birth from several centers about the same time. This concept was brought into focus for me by Dr. Francis Robicsek of Charlotte, when he forwarded to me a letter to the Editor for *The Journal of Thoracic and Cardiovascular Surgery* (1995;109:817) in the discussion of bidirectional cavopulmonary artery shunts. This letter was from Dr. Azzolina, an Italian surgeon, and discussed the early development of this procedure. Dr. Robicsek remembered my article from 1964, which I believe was probably

the first experimental evidence that total bypass of the superior vena cava could be carried out into both lungs. We were not using open heart techniques in dogs very frequently then. I am attaching an illustration from the article that we presented at the Surgical Forum that year (Fig. 1). In the continuing discussion about this concept, I thought that might be of further interest.

J. Alex Haller, Jr., MD
Department of Surgery
Division of Pediatric Surgery
The Johns Hopkins Hospital
Baltimore, MD 21287-3716
12/8/83065

Fig. 1. Diagram of anatomical relationship in tricuspid atresia and the eventual hemodynamics after total by-pass of superior vena cava into both pulmonary arteries. (From Surg Forum 1964;15:264. Reprinted with permission.)

A temporary bidirectional superior vena cava–pulmonary artery shunt

To the Editor:

My experience with the bidirectional shunt was in experiments in the mid-1950s, when Dr. José Patiño and I were exploring several techniques for establishing a by-pass of the right side of the heart. Three basic shunts were made: superior vena cava–right pulmonary artery (SVC-RPA), inferior vena cava–right pulmonary artery, and total venous bypass. Our attempt to achieve a total venous bypass made use temporarily of a bidirectional superior vena cava–pulmonary artery shunt. Published drawings of the total bypass procedure did not reveal the details of the bidirectional shunt. However, Dr. Patiño made an excellent drawing of the procedure in the protocol book, which clarifies the technique used (Fig. 1). The bidirectional shunt as used by us was not an integral part of the

operation but a temporary means of expediting completion of a total bypass as used in our experiments. If there is any merit in publishing the drawing, it is that it illustrates an early technique for making a bidirectional shunt.

After more than 3 years in the experimental laboratory, we selected the SVC-RPA shunt to apply clinically, principally because it was the safest and technically the simplest of the venous bypass operations. We had such good luck with the SVC-RPA shunt in patients with normal pulmonary arteries that there was no incentive early on to abandon it. In 1990 Kopf and associates¹ reported a total of 49 (more recently 54) patients having an SVC-RPA shunt in our clinic with the diagnosis of single ventricle or tricuspid atresia with no operative mortality. I doubt we would have done as well in the early days using the more complicated