nected to the ECLS system with a Y-shaped heparin-bonded connector. The ECLS flow is started and slowly increased as the CPB flow is slowly decreased and then stopped. The superior vena caval cannula used for CPB is then removed. Teflon tapes that were placed around the femoral artery and vein are loosely tied, cut short, and left in the wound so that the vessels can be easily found during the second-look operation. Both Dacron grafts are left in the subcutaneous space. One gram of kanamycin powder is placed on the wound and the wound is closed.

In case of perioperative myocardial infarction, we consider the combination of ECLS and intraaortic balloon pumping to be the best means to unload the heart and augment coronary flow so that the stunned myocardium can rest and recover from the acute ischemic injury.⁴ The present technique provides the following advantages: (1) Myocardial damage is avoided and systemic circulation is maintained while mechanical support is set up; (2) ischemic or congestive complications of the lower leg are lessened; (3) massive bleeding, which is the most serious complication of ECLS, is infrequent²; (We have recently stopped using heparin and now use nafamostat mesilate applied to the inflow of the centrifugal pump to achieve an activated clotting time of 140 seconds. This system can run for 48 to 72 hours without fibrin clot formation or thromboembolic complications.); (4) fewer complications are caused by reopening the chest or mediastinum, which necessitates general anesthesia. Only local anesthesia and simple surgical techniques are necessary to remove the cannulas in our method.

ECLS is a reasonable mechanical support system for postcardiotomy cardiac failure, especially in the case of perioperative myocardial infarction. Our technique is recommended to allow easy weaning from CPB and to safely maintain long-term mechanical support.

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Aortic and aortic-mitral annular enlargement

To the Editor:

I want to clarify a number of items from Dr. D. Rastan's letter to the Editor published in the April 1995 issue of this Journal (1995;109:818-9). The following statements from his letter are not realistic: (1) "However, he decided to test it, led Dr. Manouguian in the design of experiments, applied the initial patches himself. . . ." (2) "Dr. Manouguian did not fail to work on that idea," (3) "did not perform a single operation," and (4) "led him to leave the university."

I proposed, supervised, and developed both surgical techniques in 1974 through 1976 at Göttingen University without any participation by Dr. H. Rastan.^{1,2} The research was accomplished with the support of the "Deutsche Forschungsgemeinschaft." Prof. Dr. J. Koncz, former director of the Department of Cardiovascular Surgery, confirmed my authorship of the two operative procedures.

These experiments were the basis for my thesis for assistant professor.³ My thesis was accepted by the medical faculty and should be seen as proof of the scientific value of my work and of my personal integrity.

In 1974 I had already considered the possibility of patch enlargement of the aortic and mitral valve rings with aortic and mitral double valve replacement, and I conveyed this idea to Dr. D. Rastan himself. In my thesis I wrote that this method was independently conceptualized by Dr. H. Rastan and me. This statement was accepted by Dr. H. Rastan. The fact that Dr. H. Rastan is listed as coauthor of various publications does not imply his intellectual sponsorship.

I operated on the fifth patient to be treated by the first method. The first aortic and mitral double valve replacement with enlargement of both valve rings was done in January 1977 in Göttingen by P. G. Kirchhoff.⁴

I left the clinic in 1979 for personal reasons, to prove myself as a vascular surgeon, but I am still a member of the medical faculty and I lecture regularly.

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