Commentary: Vasoplegia—Be prepared!

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In this issue of the *Journal*, Sacks and colleagues¹ from Stanford have carefully defined and analyzed the phenomenon of vasoplegia after pediatric heart transplantation. They have noted that vasoplegia occurs more frequently in patients who have been supported before transplant with a continuous-flow ventricular assist device. In addition, Sacks and colleagues¹ have described a novel definition system for vasoplegia. Patients have to meet 5 criteria to be considered as having vasoplegia. These include (1) use of vasoconstrictive medication, (2) diastolic hypotension, (3) preserved systolic heart function, (4) absence of infection, and (5) central venous pressure greater than 5 mm Hg.

The occurrence of posttransplant vasoplegia can be a very frightening experience. Undiagnosed or improperly treated vasoplegia leads to life-threatening hypotensive episodes. It is very disconcerting to finish a long pediatric heart transplant, arrive in the cardiac care unit, and have the patient be hypotensive and unresponsive to standard measures. Failing to recognize vasoplegia as the cause can lead to the use of fluid resuscitation or other interventions, such as opening the chest at the bedside. These measures may actually be quite detrimental to the patient. Fluid resuscitation may cause the right ventricle to fail, and opening the chest increases the risk of sternal wound complications. Recognizing and treating vasoplegia will help avoid these potential missteps. Sacks and colleagues¹ are to be congratulated for heightening our awareness of this potentially fatal hemodynamic phenomenon.

Being prepared for vasoplegia after heart transplantation, particularly in patients who have been supported with a continuous-flow device, will lead to earlier intervention

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Central Message

Sacks and colleagues¹ have defined and analyzed vasoplegia, a phenomenon that may occur after pediatric heart transplantation in patients who have been supported with continuous-flow devices.

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with appropriate measures to treat this phenomenon. Such intervention includes use of vasopressin, norepinephrine, phenylephrine, or methylene blue. Appropriate use of these medications can lead to a rapid dramatic improvement in the patient's clinical status.

To be forewarned is to be forearmed. The cardiac intensivists should be prepared with the appropriate medications for vasoplegia—particularly in patients supported with continuous-flow devices.

Vasoplegia is a condition that is not always intuitively obvious. Recognizing it as a threat and treating it will lead in most instances to a successful outcome. As pointed out by Sacks and colleagues,¹ vasoplegia in their series was not associated with adverse outcomes. Being prepared for and properly treating patients with vasoplegia should lead to outcomes similar to those of patients who do not have vasoplegia.

Reference

1. Sacks LD, Hollander SA, Zhang Y, Ryan K, Ford MA, Maeda K, et al. Vasoplegia after pediatric cardiac transplantation in patients supported with a continuous flow ventricular assist device. *J Thorac Cardiovasc Surg*. 2019;157:2433-40.