



*Letter to the Editor / Editöre Mektup*

**Using of Extracorporeal Membrane Oxygenation in postcardiotomy heart failure**

*Postkardiyotomi kardiyak yetmezlikte Extracorporeal Membran Oksijenizasyon kullanımı*

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We congratulate Yüksel et al. for their valuable study.<sup>[1]</sup> Extracorporeal membrane oxygenation (ECMO) is undoubtedly the only option in postcardiotomy heart failure cases in the pediatric patient group. Therefore, we are unable to have any negative criticism about ECMO practice in this group of patients. However, there is something we are curious about. You have pointed that ECMO is frequently used for mechanical support in pediatric cardiac surgery patients with failure to wean from cardiopulmonary bypass (CPB).

The accurate treatment of these patients needs circulatory support with the venting of the left ventricle. This treatment would allow time for the regeneration of the left ventricle; therefore, the weaning of the circulatory support can be achieved in these patients.

In addition, ECMO alone without venting the left ventricle has a limited benefit in patients with postcardiotomy circulatory failure. It can even worsen the current situation by increasing afterload due to arterial cannulation.

Thus, what is the authors' opinion about ECMO alone treatment and how can venting of the left

ventricle be added to the treatment of patients with postcardiotomy circulatory failure?

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**Author Reply**

Dear Editor,

We would like to thank the authors for their interest to our study entitled "Extracorporeal membrane oxygenation support after pediatric cardiac surgery: our single-center experience" which was previously published in your journal.<sup>[1]</sup> Our reply to the letter is given below:

According to the existing literature, similar to our study, the routine use of venting of the left ventricle has not been preferred for pediatric cardiac surgery patients with failure to wean from CPB in many case series.<sup>[2-5]</sup> Indeed, the decision to decompress the systemic ventricle can be made on the basis of elevated atrial pressure or echocardiographic evidence of ventricular distension and poor ejection, and the left ventricle can be vented using a venous return cannula placed in the left atrium or by performing an atrial septostomy. In our series, we performed cannulation via the ascending aorta and right atrium in all patients. In patients with failure to wean from CPB, the cannulae were left in place (as a single two-stage atrial cannula for venous outflow) and were connected to the ECMO circuit. We did not perform left atrial venting; however, three patients

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with biventricular anatomy had an atrial septal defect or patent foramen ovale.

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