Response to Letter Regarding Article, "Percutaneous Left-Ventricular Support With the Impella-2.5-Assist Device in Acute Cardiogenic Shock Results of the Impella-EUROSHOCK-Registry"

We appreciate the comments by Dr Maini regarding our recent article on outcome of percutaneous left-ventricular support with the Impella-2.5 assist device in acute cardiogenic shock.[1] In this article, we summarize the results of real-world Impella-2.5 use in Europe outside of randomized trials, where the device is frequently used as last resort option in patients unresponsive to vasopressors, revascularization, and intra-aortic balloon pump support.

We agree with Dr Maini in emphasizing the fact that the disappointing data of the EUROSHOCK Registry likely reflects the selection of the most severely ill patients who have failed first-line treatment of cardiogenic shock. The lack of a control group in this registry hampers definite conclusions on efficacy of Impella-2.5 support at this point. However, decrease in plasma lactate after the beginning of Impella support suggests at least partial reversal of hypoperfusion and supports the hemodynamic efficacy of the device. As suggested in the article, earlier institution of support and rapid escalation to more powerful assist devices could be a recommended strategy in patients failing to improve, which, however, is currently rather based on experience than actual data.[1,2]

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References

1. Lauten A, Engström AE, Jung C, Empen K, Erne P, Cook S, Windecker S, Bergmann MW, Klingenberg R, Lüscher TF, Haude M, Rulands D, Butter C, Ullman B, Hellgren L, Modena MG, Pedrazzini G, Henriques JP, Figulla HR, Ferrari M. Percutaneous left-ventricular support with the Impella-2.5-assist device in acute cardiogenic shock: results of the Impella-EUROSHOCK-registry. *Circ Heart Fail*. 2013;6:23–30.
2. Engström AE, Cocchieri R, Driessen AH, Sjauw KD, Vis MM, Baan J, de Jong M, Lagrand WK, van der Sloot JA, Tijssen JG, de Winter RJ, de Mol BA, Piek JJ, Henriques JP. The Impella 2.5 and 5.0 devices for ST-elevation myocardial infarction patients presenting with severe and profound cardiogenic shock: the Academic Medical Center intensive care unit experience. *Crit Care Med*. 2011;39:2072–2079.

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