Cardiogenic shock care in centers with an infarction code program but without cardiac surgery. Response

## Atención al shock cardiogénico en centros con programa de código infarto sin cirugía cardiaca. Respuesta

### To the Editor,

We thank Dr Caballero-Borrego, writing on behalf of centers with an infarction code program but without cardiac surgery, for his letter and are pleased that they agree with us on the need for a gradation of care of centers managing patients with cardiogenic shock. The authors focus on whether cardiac surgery is essential for level 2 centers. We share their concerns and, of course, recognize the key role played by centers with experience with Impella (Abiomed, United States) and venoarterial extracorporeal membrane oxygenation (ECMO). However, the position paper of the International ECMO Network (ECMONet) and Extracorporeal Life Support Organization (ELSO)<sup>1</sup> unequivocally states that "an ECMO center should be able to provide cardiothoracic surgery... services" and clarifies the reason for this proviso: they "should have surgical services immediately available that can manage the potentially life- or limb-threatening vascular complications of cannulation". It must be remembered that such complications develop in almost a quarter of patients<sup>2</sup> and frequently occur at nighttime or on weekends.<sup>3</sup> In addition, although postinfarction shock has classically been described as being the most frequent cause of cardiogenic shock, evidence suggests that this paradigm is shifting.<sup>4</sup>

Irrespective of these considerations, we recognize that the inclusion of hospitals with an infarction code program but without cardiac surgery as ECMO centers has certain advantages (figure 1). We do not wish to exclude any group (see the scientific societies endorsing our document<sup>5</sup>) or any center. Hospitals with primary angioplasty programs without cardiac surgery are key to the management of these patients and we agree that, when there is experience with these patients and devices, including ECMO, they should be considered level 2 centers. We would like to finish by emphasizing that we believe that we must put aside the particular interests of different stakeholders and centers for the common good.





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# **AUTHORS' CONTRIBUTIONS**

M. Martínez-Sellés wrote the first draft of the manuscript. All of the authors have contributed substantially to the final draft and approved its submission.

## **CONFLICTS OF INTEREST**

No conflicts of interest.

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