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Neurohormonal treatment in tako-tsubo cardiomyopathy precipitated by COVID-19. Response

Tratamiento neurohormonal en miocardiopatía de tako-tsubo *precipitada por COVID-19. Respuesta*

To the Editor,

The neurohormonal treatment received by our patient comprised a beta-blocker, bisoprolol, and an angiotensin-converting enzyme inhibitor (ACE-I), enalapril. At 3 months of follow-up, he had no further episodes of chest pain or signs of heart failure.

As mentioned in the Letter, although treatment with beta-blockers may slow the effect of catecholamine release thought to be the pathophysiological mechanism behind tako-tsubo cardiomyopathy, clinical benefits have not been demonstrated. However, treatment with ACE-I, which has shown improved survival in a registry, could contribute to ventricular remodeling.

In the case of coronavirus disease 2019 (COVID-19), treatment with ACE-I has generated controversy. When the disease first emerged, animal studies[1] demonstrated that coronavirus uses angiotensin-converting enzyme 2 (ACE-2), an aminopeptidase with abundant expression in the lungs and heart, as a receptor for cell entry. Treatment with ACE-I increases the expression of ACE-2, leading to the hypothesis that it may affect susceptibility to the infection or its virulence. Later, a case-control study[2] with more than 6000 patients found no evidence of an association between these drugs and COVID-19; current protocols therefore recommend continuing treatment with ACE-I in patients with SARS-CoV-2 infection in the absence of other contraindications.

As tako-tsubo cardiomyopathy is a rare complication of SARS-CoV-2 infection, to date there are no specific studies on the recommended treatment. The only treatment with evidence on survival in COVID-19 is corticosteroids[3] (dexamethasone), possibly due to its effect on the inflammatory cascade that occurs in this disease. Bearing in mind that the systemic inflammatory status could contribute to the development of tako-tsubo cardiomyopathy, treatment with dexamethasone may affect its onset and outcome, although specific studies are needed to assess this.

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Clinical management indicators for the cardiovascular area. A note for the debate

Indicadores de gestión clínica en el área cardiovascular. Un apunte para el debate

To the Editor,

The editorial by González-Juanatey et al.[1] is of great interest and stimulates the debate on the metrics to be used by cardiology units (CU) (services, clinical management units, institutes, etc) to assess their management results. The focus of the proposal and the 111 indicators it contains deserve joint reflection by those responsible for CUs, which could be promoted by the Spanish Society of Cardiology (SEC). The following points are offered in relation to this proposal:

- "Measure outcomes. Add value". In line with Porter's strategy of "adding value",[2] the authors suggest that health outcome indicators should be prioritized. Although this approach is correct, only a third of the proposed indicators—many of which overlap—are outcome indicators (mortality, readmissions, complications). It is also difficult to understand the rationale underlying some of the process or activity indicators (does

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