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Fulminant myocarditis in the time of coronavirus

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This Commentary refers to: 'Coronavirus fulminant myocarditis saved with glucocorticoid and human immunoglobulin', by H. Hu *et al.*, doi:10.1093/eurheartj/ehaa190.

We congratulate Hongde Hu *et al.* for their timely work concerning a case of healed fulminant myocarditis.[1] The authors suggest that the diagnosis is coronavirus myocarditis because nucleic acid tests for 11 other viruses were negative. Although very likely, the diagnosis is not certain. Not all the diagnostic tests necessary for a differential diagnosis have been carried out. Global type stress-induced cardiomyopathy has not been ruled out with certainty.[2] The authors state that glucocorticoid and immunoglobulin therapy are of important value in this type of patient and conclude that this case report is helpful in treating other similar patients. We disagree with these conclusions. Early glucocorticoid therapy has not been proven with certainty to be effective in acute myocarditis. In a systematic review including 719 patients, corticosteroids did not reduce mortality.[3] Glucocorticoids exacerbate acute murine viral myocarditis.[4] The current position statement of the European Society of Cardiology recommends that immunosuppression should be started only after ruling out active infection.[2] The patient presented in the case report had an acute infection. Moreover, limited data are available on the use of immunoglobulins in acute myocarditis. A systematic review of intravenous immunoglobulins for therapy of acute myocarditis concluded that there are insufficient data to recommend their routine use.[5] In the absence of multicentre randomized studies, the European Society of Cardiology does not give recommendations for the use of immunoglobulins in acute myocarditis.[2]

It is possible that further studies may identify a subset of patients with acute coronavirus myocarditis responsive to such a regimen of glucocorticoid and human immunoglobulin. Until then, current literature data do not seem to justify the extensive use of these therapies.

Conflict of interest: none declared.

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