

C86 TAKO-TSUBO SYNDROME IN PATIENTS WITH COVID-19: A SINGLE CENTRE RETROSPECTIVE CASE SERIES

A. Alonzo, S. Di Fusco, L. Castello, A. Spinelli, V. Altamura, D. Mocini, G. Imperoli, F. Colivicchi
P.O. SAN FILIPPO NERI - ASL ROMA 1, ROMA

Background: COVID-19 presents with a wide range of symptoms, from mild flu-like complaints to severe acute respiratory distress and cardiovascular complications. Recent literature provides some case reports of Tako-Tsubo syndrome (TTS) in COVID-19 patients. However, its prevalence, pathophysiological mechanisms and prognostic impact in this setting is unknown.

Methods: We collected data of patients hospitalized for COVID-19 in our multidisciplinary COVID-19 department who had a diagnosis of TTS during hospitalization. The criteria for hospital admission were: 1) naso-pharyngeal polymerase chain reaction diagnosis of SARS-CoV-2 infection and 2) symptoms and signs of mild-moderate COVID-19 with a paO_2/FIO_2 ratio > 200 . The period of the study covered the second and third wave of the pandemic in Italy.

Results: Of 635 patients admitted to our centre, we had four cases, two males and two females, with TTS associated with COVID-19. No patient had any classical trigger for TTS except for COVID-19. Mean age was 72 years (67-81) and all patients had a diagnosis of SARS-CoV-2-related interstitial pneumonia confirmed by computed tomography. One patient was admitted to our centre after stabilization of a critical respiratory distress syndrome that required intubation. All patients showed typical apical ballooning with a transitory reduction of left ventricle (LV) systolic function. The mean LV ejection fraction (LVEF) at TTS onset was 42% (40-48%). ECG showed ST-segment elevation in two cases, while an evolution with negative T waves and long QTc was observed in all patients. All patients were treated in the intensive care unit (ICU), with a median ICU stay of 9 days. The long ICU stay duration was due to intercurrent superinfections. All patients recovered a normal LVEF before discharge. The mean value of the high-sensitivity troponin T peak was 1092 ng/L. Three patients underwent coronary angiography. One patient needed vasopressors in the acute phase. Two patients had a previous diagnosis of cognitive impairment. The time interval from hospital admission to TTS onset was 4 (2-6) days, and the time interval from COVID-19 symptom onset to TTS diagnosis was 10 (8-12) days. The mean hospital stay was 32 days (26-37).

Conclusion: COVID-19 may be a trigger for TTS. Possible mechanisms to explain the contribution of COVID-19 to TTS development include the activation of the inflammatory cascade, direct myocardial injury, and stress-related conditions due to COVID-19.

