18.2 - Epidemiology, Prognosis, Outcome

The impact of nationwide lockdown on acute coronary syndromes hospitalization rate in the Western Macedonia regional hospital of Greece

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Introduction: World Health Organization declared the Covid-19 outbreak a global pandemic on March 11, 2020. The pandemic is associated with more than 75 million cases and more than 1.5 million deaths worldwide. Greece implemented a nationwide lockdown on March 23, 2020, to control the pandemic wave and prevent reducing morbidity and mortality due to Covid-19. During this period, acute coronary syndromes (ACS) hospitalization in the cardiology department was reduced. In addition, the second pandemic wave also led to a new national lockdown on November 7, 2020, although it was implemented 15 days earlier in the relative regional hospital area due to high viral load.

Purpose: Our study evaluated the number of hospitalized patients with ACS during the nationwide lockdown period, comparing them with the previous years (period 2018 and 2019).

Material and Methods: Data recordings regarding ACS (unstable angina, NSTEMI, STEMI) hospitalization rates in the Cardiology department were collected from the hospital"s register. Each year"s data analysis interval included the periods of the nationwide lockdown of 2020; March 23 to May 3 and October 14 to December 10. Statistical analysis was performed between periodic groups using the chi-square test (IBM SPSS Statistics software, version 23.0).

Results: During 2018, the number of patients hospitalized for ACS was 81 and consisted of 39,1% of the total hospitalizations in the Cardiology Department. In 2019 the number of patients hospitalized for ACS was 62 and consisted the 48,8% of the total hospitalizations, while in 2020, the number of patients hospitalized for ACS was 30 and consisted the 27,5% of the total hospitalizations. Furthermore, there was a statistically significant difference ($p < 0,05$) regarding ACS event hospitalization rate between the period of lockdown (March to May and October-December 2020) and the COVID-19-free period of the previous year (March to May and October to December 2019). There was no statistically significant difference ($p > 0,05$) regarding ACS event hospitalization rate between the period of lockdown (March to May and October to December 2020) and the COVID-19-free period of the year 2018 (March to May and October to December). Finally, there was no statistically significant difference ($p > 0,05$) in ACS event hospitalization rate between March to May and October to December regarding the years 2018 and 2019.

Conclusion: Our results are in compliance with the ESC"s comparative survey regarding the observed worldwide reduction of hospitalizations for ACS during the COVID-19 lockdown era, suggesting a potential impact of lockdown in both non-environmental and environmental risk factors for cardiovascular disease. Factors of the relative epidemiological reduction are complexed and puzzled, while morbidity and mortality of ACS remained relatively stable even after the lockdown, so future studies are necessary to further investigate them.