Epidemiology, Prognosis, Outcome

Home blood pressure during COVID-19 related lockdown in patients with hypertension

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COVID-19 pandemic has induced governments to promote strict containment measures which inevitably altered patients' lifestyle with potential effects on blood pressure (BP) control. We aimed to evaluate the changes in home BP (HBP) during the COVID-19 related lockdown in a cohort of hypertensive patients.

Consecutive adult patients with arterial hypertension and stable medical treatment were recruited. HBP values were recorded before and after lockdown in March 2020. An additional set of HBP measurements, recorded one year before the pre-lockdown period, were also considered as reference because of similar environmental temperature.

A total of 126 patients were included: 47% males, mean age 66 [58-72], reference HBP 124.78 (9.90)/76.19 (8.10) mmHg. In the whole group, patients during lockdown exhibited lower systolic and diastolic HBP values compared to the pre-lockdown period [123.23 vs 125.05 mmHg, p = 0.008 and 74.45 vs 75.28 mmHg, p = 0.023, respectively]. Patients with uncontrolled HBP showed the most consistent drop of systolic HBP [136.06 (8.36) and 138.0 (2.08) vs 130 (9.35) p = 0.001 and p < 0.001] and diastolic [81.30 (6.75) and 84.9 (1.85) vs 78.78 (9.25), p = 0.018 and p = 0.002] from pre-lockdown to lockdown and when considering reference values taken one year before, respectively. (Figure 1: Mean values at baseline, pre-lockdown and during lockdown in the 3 groups for systolic (A) and diastolic (B) blood pressure (dotted line = uncontrolled BP group, solid line = unstable BP control, dashed line = controlled BP group). *p<.001 (one year before lockdown vs lockdown SBP), #p = 0.001 (pre-lockdown vs lockdown SBP), $p = 0.002 (one year before lockdown vs lockdown DBP), §p = 0.018 (pre-lockdown vs lockdown DBP). Grey box refers to the lockdown period. SBP = systolic blood pressure, DBP = diastolic blood pressure.)

In conclusion, this study reports for the first time the occurrence of no changes or even a reduction in home BP of treated hypertensive patients during lockdown due to COVID-19. These results may have implications for the management of patients with high blood pressure not only during the current pandemic but also in case of future lockdown conditions.

Abstract Figure 1