Supplementary figure 1: Cohort selection from MINAP registry



Supplementary Figure 2: Cohort selection from BCIS registry



**Supplementary Figure 3: Temporal trends of monthly proportions of OHCA patients presenting with STEMI before and during COVID19 period**

OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020, STEMI= st elevation acute myocardial infarction

**Supplementary Figure 4: Temporal trends of monthly proportion of patients presenting with OHCA before and during the COVID-19 pandemic amongst the rapid reporting hospitals.**

OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020

**Supplementary figure 5: Incidence rate ratio of OHCA during COVID-19 pandemic amongst the rapid response hospitals**



OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020

**Supplementary Figure 6: Temporal trends of use of percutaneous coronary intervention before and during COVID19 period in England**

OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020

**Supplementary Figure 7: Monthly adjusted probability of mortality between pre-COVID-19 and COVID-19 OHCA groups in England**

OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020

Supplementary Table 1: Percentage of missing information for each variable from MINAP registry

|  |  |
| --- | --- |
| **Variables** | **Number (percentage)** |
| Age | 0 |
| Sex | 0 |
| Race | 5,500 (18.5%) |
| BMI  | 0 |
| Heart rate | 0 |
| Systolic blood pressure | 0 |
| Clinical syndrome | 0 |
| Creatinine | 0 |
| Kilip Class | 2,604 (8.8%) |
| LV systolic function | 5,638 (19.0%) |
| Percutaneous coronary intervention | 3,702 (12.5%) |
| Coronary artery bypass graft | 3,705 (12.5%) |
| Heart failure | 3,568 (12.0%) |
| Hypercholesterolemia | 3,574 (12.0%) |
| Angina | 3,641 (12.3%) |
| Cerebrovascular disease | 3,643 (12.3%) |
| Myocardial infarction  | 3,333 (11.3%) |
| Peripheral vascular disease | 3,692 (12.5%) |
| Chronic kidney disease | 3,204 (10.8%) |
| Diabetes | 917 (3.0%) |
| Hypertension | 3,168 (10.7%) |
| Smoking status | 5,534 (18.7%) |
| Asthma / COPD | 3,557 (12.0%) |
| Family history of CHD | 7,462 (25.2%) |
| Low molecular weight heparin | 7,177 (24.2%) |
| Unfractionated heparin  | 7,045 (23.8%) |
| Warfarin | 7,270 (24.5%) |
| Loop Diuretic | 7,085 (23.9%) |
| Glycoprotein use | 6,891 (23.2%) |
| Seen by cardiologist | 381 (1.3%) |
| Coronary angiography | 3,523 (11.9%) |
| Percutaneous coronary intervention  | 9,677 (32.6%) |
| P2Y12 use | 0 |
| Dual antiplatelet therapy  | 0 |
| ACE inhibitors | 6,480 (21.9%) |
| In-hospital mortality  | 0 |

CHD= coronary heart disease, COPD= chronic obstructive pulmonary disease, LV= left ventricle, bpm= beats per minute, BMI= body mass index, OHCA= out of hospital cardiac arrest, UK lockdown= 22nd March 2020, COVID19 = Corona virus infection. Pre-COVID19 period= 1st February 2019 to 14th May 2019, COVID19 period= 1st February 2020 to 14th May 2020

**Supplementary Table 2: Procedural characteristic of patients presenting with OHCA undergoing PCI before and during COVID-19 pandemic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables** | **Total AMI patients****N=22,026** | **Pre-COVID-19 OHCA****N= 674** | **COVID-19 OHCA****N=270** | **P value\*** |
| Lesion attempted |  |  |  | 0.26 |
| 1 | 14,965(68.9%) | 480 (71.8%) | 216 (81.2%) |  |
| 2 | 4171 (19.2%) | 129 (19.3%) | 31 (11.6%) |  |
| 3 or more | 1442 (6.6%) | 50 (7.5%) | 16 (6.2%) |  |
| Call to Balloon time | 8.8 (18.9) | 2.5 (4.5) | 3.2 (5.9) | 0.12 |
| Vessel attempted |  |  |  | 0.05 |
| Grafts | 357 (1.7%) | 7 (1.1%) | 2 (0.8%) |  |
| LMS | 485 (2.3%) | 8 (1.2%) | 10 (3.8%) |  |
| RCA | 9314 (45.0%) | 367 (55.8%) | 145 (54.5%) |  |
| LAD | 3925 (19.0%) | 113 (17.2%) | 35 (13.2%) |  |
| LCX | 6608 (31.9%) | 163 (24.8%) | 74 (27.8%) |  |
| Multi-vessel PCI | 4200 (19.1%) | 85 (12.6%) | 44 (21.2%) | <0.001 |
| Number of stents |  |  |  | 0.26 |
| 0 | 3221 (14.9%) | 72 (10.8%) | 37 (14.1%) |  |
| 1 | 11301 (52.4%) | 376 (56.6%) | 153 (58.4%) |  |
| 2 | 4755 (22.1%) | 138 (20.8%) | 50 (19.1%) |  |
| 3 or more | 2278 (10.6%) | 78 (11.7%) | 22 (8.4%) |  |
| Inotropic support | 334 (1.6%) | 113 (17.4%) | 37 (14.2%) | 0.23 |
| Intra-aortic balloon pump | 127 (0.6%) | 49 (7.6%) | 16 (6.1%) | 0.45 |
| Impella | 16 (0.1%) | 1 (0.2%) | 1 (0.4%) | 0.50 |
| Glyoprotein IIb/IIIa inhibitor use | 3075 (16.2%) | 243 (40.7%) | 99 (42.1%) | 0.71 |
| TIMI flow post PCI  |  |  |  | **0.64** |
| 0 | 431 (3.0%) | 34 (6.5%) | 15 (7.3%) |  |
| 1 | 120 (0.8%) | 5 (1.0%) | 3 (1.5%) |  |
| 2 | 419 (2.9%) | 25 (4.8%) | 6 (2.9%) |  |
| 3 | 13529 (93.3%) | 460 (87.8%) | 182 (88.3%) |  |
| IVUS use | 1946 (9.8%) | 44 (7.4%) | 24 (10.0%) | 0.22 |
| OCT use | 726 (3.7%) | 21 (3.5%) | 11 (4.6%) | 0.48 |
| FFR/iFR use | 2236 (11.3%) | 15 (2.5%) | 5 (2.1%) | 0.71 |
| Aspirin  | 17585 (93.6%) | 442 (78.4%) | 175 (76.4%) | 0.55 |
| Clopidogrel  | 7451 (40.9%) | 130 (24.2%) | 47 (21.2%) | 0.37 |
| Ticagrelor | 8079 (44.3%) | 186 (34.6%) | 80 (36.0%) | 0.70 |
| Heparin | 4502 (24.7%) | 142 (26.4%) | 64 (28.8%) | 0.49 |
| Procedural outcomes  |  |  |  |  |
| MACCE | 615 (2.9%) | 151 (23.2%) | 42 (17.0%) | <0.001 |
| In-hospital bleeding | 92 (0.4%) | 10 (2.0%) | 2 (1.0%) | 0.34 |
| In-hospital death  | 316(1.4%) | 136 (20.2%) | 40 (14.8%) | 0.05 |

\*All statistical comparisons were made between pre-COVID19 and COVID-19 period group only, LMS= left main stem, RCA= Right coronary artery, LAD= left anterior descending artery, LCX= left circumflex artery, IVUS= intravascular ultrasound, OCT= optical coherence tomography, FFR= fractional flow reserve, iFR= instantaneous flow reserve, MACCE= major adverse cerebrovascular events.