Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Results: The average age of women is 70.77 ± 11.7 yrs, of men - 60.52 ± 11.5. In women, MI was significantly more likely to develop against the background of arterial hypertension (p < 0.044), diabetes mellitus (p < 0.002) and obesity (p < 0.043), and the prevalence of smoking was higher in the male (p < 0.001). The GRACE in women is higher than in men (p < 0.007). The most common complication of MI in both groups was acute heart failure (HF), which was recorded in 53.7% of women and 55.5% of men (RR 0.96; 95% CI 0.75 – 1.23; p > 0.05). The frequency of deaths was statistically significantly higher in women; they were more often registered as hospitalized (11.4% versus 6.4%; RR 1.79; 95% CI 0.94 – 3.43; p < 0.05), so and post-hospital mortality (9.2% versus 6.4%; RR 1.44; 95% CI 0.68 – 3.02; p > 0.05).

Conclusions: The most significant risk factors for the development of MI in women are diabetes mellitus, arterial hypertension and obesity. The course of myocardial infarction in women is associated with the development of severe heart failure, and the immediate prognosis and outcome of myocardial infarction in women is more unfavorable than in men.

Methods:

Background and Aims: Limited information is available on the clinical characteristics and outcomes of SARS-CoV-2 (COVID-19) patients with acute myocardial infarction.

Methods: In a one-center retrospective study, we examined a group of patients with acute myocardial infarction and COVID-19 who were admitted to the vascular center from October 01, 2020 to November 30, 2020. A total of 28 patients, 19 (67.8%) men, average age 65 [58, 71] years. There was a high burden of comorbidities, atrial fibrillation in 42%, and diabetes mellitus in 56%.

Results: All patients with myocardial infarction and COVID-19 had pneumonia with 50-75% lung involvement. During hospitalization, 14 (50%) developed acute respiratory distress syndrome, and 8 (28%) required mechanical ventilation. 23 (82%) patients received primary percutaneous coronary intervention (PCI), and 4 (14.2%) received fibrinolytic therapy. 8 (28%) patients required cardiac resuscitation during hospitalization, and 6 (21.4%) died. In 3 (75%), initially receiving fibrinolytic therapy, fibrinolysis was successful. Stent thrombosis occurred in 8 (34.7%) patients after PCI.

Conclusions: We analyzed a series of COVID-19 infections in patients with myocardial infarction. Found a high incidence of stent thrombosis, which indicates a possible need to adapt the treatment of acute myocardial infarction in patients with COVID-19. Every fifth patient with COVID-19 in combination with myocardial infarction died in a hospital.

References:

EP686 / #453, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-12 PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE; MISCELLANEOUS, POSTER VIEWING SESSION.
CHARACTERISTIC OF PATIENTS WITH COVID-19 AND MYOCARDIAL INFARCTION
N.A. Koriagina, V.S. Koriagin, K.V. Prokhorov, G.N. Spasenkov. Polyclinic Department, Perm state medical university, Perm, Russian Federation

Background and Aims: The aim of the study is to determine there are delays in the provision of medical services for acute myocardial infarction during the COVID-19 pandemic compared to the same period in 2019.

Methods: In this one-center retrospective study, we evaluated patients admitted with ST-segment elevation myocardial infarction (STEMI) or non-ST-segment elevation myocardial infarction (NSTEMI) during the COVID-19 pandemic (10/01/2020 - 11/30/2020) versus patients admitted in the same period a year earlier.

Results: 30 and 62 patients presented with STEMI in 2020 and 2019. The median pain-to-door delivery time was significantly longer during the pandemic (1885 [880, 5732] vs 606 [388, 944] min, p < 0.0001). In 2020, there was a significant delay in door-to-door reperfusion time, 332 (182, 581) vs 194 (92, 329) min (p = 0.0371). There were 24 (80%) and 25 (42%) patients who presented 12 hours after the onset of pain in the pandemic and pre-pandemic eras (p = 0.0006). There were 47 and 60 patients with NSTEMI during the pandemic and before the pandemic, respectively. The average delivery time from pain to door during a pandemic is longer (620 [255, 1500] vs 349 [146, 659] min, p < 0.0141). There were 22 (47%) and 14 (24%) patients, who turned 12 hours after the onset of pain in the pandemic and pre-pandemic eras (p = 0.0127). There was no significant delay in door-to-reperfusion time (p = 0.9833).

Conclusions: Patients waited significantly longer during the pandemic to seek medical attention. There is a 3-fold increase in the time from the onset of symptoms to revascularization.

References:

EP687 / #1064, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-12 PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE; MISCELLANEOUS, POSTER VIEWING SESSION.
ASSESSMENT OF DISTAL CORONARY CALCINOSIS BEFORE CORONARY ARTERY BYPASS GRAFTING: THE ROLE OF COMPUTED TOMOGRAPHY
R. Akchurin 1, A.A. Shiryaev 1, V.P. Vasiliev 1, R. Pashaev 2, V. Zaikovsky 1, S. Kurbangaliev 1, 1 Cardiovascular Surgery, NATIONAL MEDICAL CARDIOLOGY RESEARCH CENTER, Moscow, Russian Federation; 2 Cardiovascular Department, FSBI “National Medical Research Center of Cardiology” of the Ministry of Health of Russia, Moscow, Russian Federation

Background and Aims: Coronary artery calcification (CAC) limits the possibilities of surgical treatment of coronary artery disease and is associated with worse clinical outcomes. There are no guidelines and algorithms for using the coronary reconstructions (endarterectomies, onlay-flap anastomoses to vessels <1.5 mm in diameter) in severe distal CAC; preoperative assessment of the severity of CAC is not included in clinical practice. Objective: To evaluate the need for preoperative computed tomography (CT) assessment of CAC in candidates for coronary artery bypass grafting (CABG).

Methods: It was a retrospective study in patients operated on in 2017-18 years. A total of 106 patients with distal CAC who underwent CABG were enrolled. All patients in the preoperative underwent CT angiography in doubtful cases. 237 calculated target vessels were identified and distributed into two groups: mild calciumification <180 ° (n = 124), and severe circular calciumification ≥180 ° (n = 113). Coronary artery reconstructions were performed by the surgeon. The use of coronary reconstructions was analyzed according to CAC.

Results: A total of 467 distal coronary anastomoses were performed (114 autoarterial, 353 autovenous), the mean number of anastomoses was 4.4 ± 0.7. Some of the distal anastomoses were performed using coronary reconstructions (n = 73). The frequency of using the coronary reconstructions was higher in the severe circular calcified arteries (47% versus 15%, OR = 5.1, 95% CI 2.7–9.3, p < 0.001).

Conclusions: Severe circular calcification of the coronary arteries 5-fold increases the need for coronary reconstructions. The use of CT in the preoperative period allows choosing optimal surgical strategy for CABG in patients with CAC.

References:

EP688 / #716, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-12 PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE; MISCELLANEOUS, POSTER VIEWING SESSION.
THE ROLE OF RIPC IN PREVENTING ORGAN DAMAGE, INFLAMMATION AND OXIDATIVE STRESS DURING LOWER LIMB DSA: A RANDOMISED CONTROLLED TRIAL
K. Kuusik 1,2, T. Kasepalu 1,3, M. Zilmer 1, J. Eha 1,3, M. Vahi 2, L.A. Torop 3, J. Lieberg 5, J. Kals 2,6,7. 1 Cardiovascular Department, Tartu University Hospital, Tartu, Estonia; 2 Centre Of Excellence For Genomics And Translational Medicine, Institute Of Biomedicine And Translational Medicine, Department Of Biochemistry, University Of Tartu, Tartu, Estonia; 3 Department Of Urology, Tartu University Hospital, Tartu, Estonia; 4 Department Of Orthopaedics And Traumatology, Tartu University Hospital, Tartu, Estonia; 5 Department Of Cardiology, Tartu University Hospital, Tartu, Estonia; 6 Department Of Cardiovascular Surgery, Tartu University Hospital, Tartu, Estonia; 7 Department Of Critical Care Medicine, Tartu University Hospital, Tartu, Estonia; 8 European Society Of Cardiology

Background and Aims: The role of RIPC in preventing organ damage, inflammation and oxidative stress during limb DSA has not been studied in a randomised controlled trial.

Methods: A total of 12 patients with severe heart failure (HF), which was recorded in 53.7% of women and 55.5% of men (RR 0.96; 95% CI 0.75 – 0.9833).

Conclusions: Patients waited significantly longer during the pandemic to seek medical attention. There is a 3-fold increase in the time from the onset of symptoms to revascularization.