

The differences of non-ST-segment elevation myocardial infarction during the COVID-19 pandemic and before it

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Introduction

Acute myocardial infarction (AMI) is one of the most common severe emergent cardiovascular disease. Approximately 50–70% of all AMI patients presented non-ST-segment elevation myocardial infarction (NSTEMI). During the COVID-19 pandemic, the number of primary percutaneous coronary intervention reduced significantly among ST-segment elevation myocardial infarction (STEMI) patients, while less attention has been paid to the management of NSTEMI. [1] The prognosis of patients suffering from AMI directly depends on rapid diagnosis and early treatment. AMI patients may be presenting at later stages during the pandemic due to fear of acquiring coronavirus in healthcare facilities [2].

Results

The study involved 110 (40,29%) women and 163 (59,71%) men who presented with NSTEMI in the pre-pandemic era. Also the study involved 68 (34,69%) women and 128(65,31%) men who presented with NSTEMI in the pandemic era. The average age of the women was $71 \pm 12,15$ years and $73 \pm 0,28$ years respectively. And the average age of the men was $66 \pm 11,43$ years and $67 \pm 12,05$ years respectively. The number of patients with pain-to-door time from 24 to 48 hours was larger during pre-pandemic era compared to the pandemic 59 (23,41%) vs. 23 (12,57%) ($p=0,00438$). The number of percutaneous transluminal coronary angioplasty increased during the pandemic (68,13%, 76,56% respectively; $p=0,0466$). The number of only coronary angiography decreased in the pandemic era (35,53%, 23,47% respectively; $p=0,00512$). When pain-to-door time was more than 48 hours the mortality rate was higher ($p=0,0444$) in the pandemic era.

Aim

Our study aimed to compare logistical delay's outcomes between equal cohorts during the Covid-19 pandemic and before it.

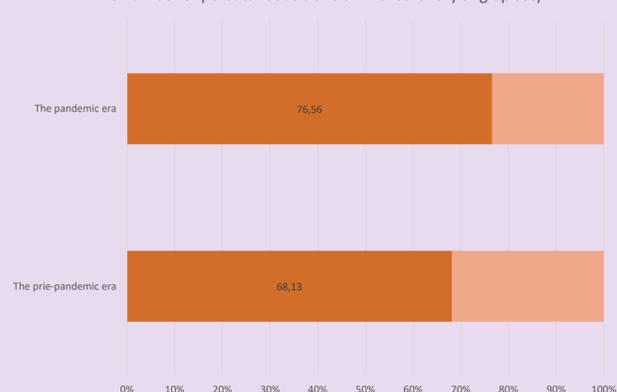
Conclusions

Patients were treated with percutaneous transluminal coronary angioplasty statistically significant more often during the pandemic compare with previous year. Though the number of only coronary angiography decreased in the pandemic era. The mortality rate was higher when pain-to-door time was more than 48 hours in the pandemic era.

Methods

The study involved 469 patients with NSTEMI diagnosis registered in the database from October to December 2019 ($n=273$) and from October to December 2020 ($n=196$) in The Hospital of Lithuanian University of Health Sciences Kauno klinikos The Department of Cardiology. In this study we involved only patients with NSTEMI. Logistical delays, type of intervention, hospital mortality were examined. Statistical calculations were performed using SPSS 22.0 software, Z-statistic. Statistically significantly different at $p<0.05$.

The number of percutaneous transluminal coronary angioplasty



The number of only coronary angiography



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