

51st CARDIOCON 2022: ABSTRACT

UNFOLDING THE REALITY OF SMOKING PARADOX IN PATIENTS PRESENTING WITH STE-ACS UNDERGOING PRIMARY PERCUTANEOUS CORONARY TREATMENT

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Objectives: Main objective for this study to unfold this controversy in South Asian population in terms of clinical, angiographic parameters and its in-hospital outcomes.

Methodology: In this study, we included 1756 consecutive patients diagnosed with STEMI undergoing primary PCI. Patients were classified into smokers and nonsmokers. Comparison was done on the basis of baseline characteristics, clinical presentation, angiographic features and in-hospital mortality between two groups. Multivariable logistic regression analysis was performed to evaluate the paradoxical role of smoking.

Results: Smokers were younger (53.78 ± 11.16 years vs. 56.43 ± 11.17 years; $p < 0.001$) and more frequently male (98.7% vs. 69.9%; $p < 0.001$), and had less diabetes (19.6% vs. 44.8%; $p < 0.001$) and hypertension (38.5% vs. 64.9%; $p < 0.001$). Smokers presented less frequently in Killip III (5.6% vs. 8.1%; $p < 0.001$) and Killip IV (2.5% vs. 4.8%; $p < 0.001$) in smokers group. Smokers mostly had single vessel disease (41.7% vs. 34.4%; $p = 0.013$) whereas non-smokers had complex disease and frequently presented with total occlusion of the culprit vessel (64.6% vs. 58.8%; $p = 0.040$). Complication such as slow flow/no-flow (24.3% vs. 33.2%; $p < 0.001$) and cardiogenic shock (2.3% vs. 4.6%; $p < 0.001$) were also seen less often among smokers. Smokers has significantly lesser mortality (1.8% vs. 4.3%; $p = 0.009$) compared to non-smokers with an odds ratio (OR) of 0.41 [95% CI: 0.21-0.82, $p = 0.011$], however, adjusted OR on multivariable analysis was 0.67 [95% CI: 0.31-1.41, $p = 0.290$]. Independent predictors of mortality were found to be history of CVA/stroke, pre-procedure LVEDP, multi-vessel diseases, and RBS in ER adjusted OR of 3.83 [95% CI: 1.24-11.79; $p = 0.019$], 1.07 [95% CI: 1.03-1.12; $p = 0.002$], 2.2 [95% CI: 1.07-4.54; $p = 0.033$], and 1 [95% CI: 1.0-1.01; $p = 0.032$], respectively.

Conclusion: The controversial phenomenon of smoking paradox seems to be unfolded in South Asian population in post STE-ACS patients. The paradoxical protective role of smoking is confounding effect of mainly younger age, less coronary artery disease burden and complexity, lower prevalence of diabetes and hypertension and lower rate of Killip III/IV at presentation. Hence, the protective effect is insignificant in multivariable analysis and history of CVA/stroke, pre-procedure LVEDP, multi-vessel diseases, and RBS in ER were found to be independent predictors of in-hospital mortality.

Keywords: Smoking, acute coronary syndrome, STEMI, Primary PCI, angiography

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