



# Prevalence of Heart Disease Risk Factors in Patients with Acute Coronary Syndrome Referred to the Emergency Department of Shariati Hospital in Isfahan in 2022

Ali Torkan<sup>1\*</sup>, Moloud Raki<sup>2</sup>, Arash Najafian<sup>2</sup>

<sup>1</sup>Clinical Research Development Center, Islamic Azad University of Najafabad, Iran

<sup>2</sup>Faculty of Medicine, Najafabad Branch, Islamic Azad University, Najafabad, Iran

## OPEN ACCESS

### \*Corresponding Author:

Clinical Research Development Center, Islamic Azad University of Najafabad, Iran

## ABSTRACT

**Introduction:** Acute coronary syndrome (ACS) is a spectrum of symptoms indicating acute myocardial ischemia and is a leading cause of death in individuals over 35. ACS encompasses unstable angina, Non-ST Elevation Myocardial Infarction (NSTEMI), and ST Elevation Myocardial Infarction (STEMI). Key risk factors for coronary heart disease (CHD) and ACS include smoking, hypertension, diabetes, hyperlipidemia, male gender, obesity, poor diet and lifestyle, and psychological stress. Given its severity, accurate diagnosis and rapid identification of primary risk factors are crucial for effective treatment and prognosis. This study investigates common risk factors of ACS in patients admitted to the emergency room of Shariati Hospital.

**Methods and Materials:** This cross-sectional study examines the prevalence of heart disease risk factors in ACS patients at Shariati Hospital's emergency department in Isfahan in 2022. The study includes patients admitted for acute coronary syndrome during this period.

**Results:** Out of 420 patients, 11 were excluded based on exclusion criteria, leaving data from 409 patients for analysis. Of these, 321 (78.5%) were male, and 88 (21.5%) were female. ACS types were distributed as 31.5% STEMI, 38% NSTEMI, and 30.5% UA. Patients' ages ranged from 36 to 93 years, averaging  $62.49 \pm 7.77$  years. The average age for women was 64.7 years, and for men, it was 61.9 years. Gender significantly correlated with age of onset ( $p = 0.05$ ). Age also significantly correlated with ACS type, with STEMI patients being older on average ( $p = 0.05$ ). Obesity was found in 203 patients (49.6%), with 65 women and 45 men affected. Smoking was reported in 43 patients. Hypertension was present in 167 patients (41%), significantly more common in those with NSTEMI ( $p = 0.05$ ). Diabetes was present in 173 patients (42%), with no significant correlation with ACS type ( $p = 0.5$ ). Hyperlipidemia was found in 69 patients, with a significant relationship to ACS type, being most common in NSTEMI and least in UA ( $p = 0.05$ ). Stress and psychological pressure were reported in 58 patients, significantly related to ACS type, mostly STEMI ( $p = 0.05$ ). A family history of premature myocardial infarction was noted in 26 patients, significantly associated with STEMI ( $p = 0.05$ ).

**Conclusion and Discussion:** This study aimed to identify the prevalence of heart disease risk factors in ACS patients, specifically those with STEMI, UA, and NSTEMI at Shariati Hospital in Isfahan in 1401. ACS causes significant mortality and severe complications. Managing and preventing risk factors is crucial for ACS prevention and treatment. Identifying these factors helps healthcare providers develop targeted prevention and treatment strategies.

### Citation:

Torkan A, Raki M, Najafian A. Prevalence of Heart Disease Risk Factors in Patients with Acute Coronary Syndrome Referred to the Emergency Department of Shariati Hospital in Isfahan in 2022. *Iranian biomedical journal* 2024; 28(7): 403.

**Keywords:** Acute coronary syndrome, Angina pectoris, Heart diseases, Risk factors