

M.Sc. Thesis Summary

Study of Frequency Distribution of HbA1c $\geq$ 6.5 Percent in Patients with Acute Coronary Syndrome in 5Azar Medical and Education Center of Gorgan in 2020

¹Pardis Alizade Moghadam, ²Shahram Moghaddam and ³S. Mehran Hossein

¹Student, ²Advisor (0000-0003-0753-6900) and ³Supervisor (0000-0002-4783-7428/98.29711)

^{1,2,3}Golestan University of Medical Sciences, Iran

Background and Objective: Diabetes is an important public health challenge associated with cardiovascular complications and mortality. The European Society of Cardiology recommends that all patients admitted with acute coronary syndrome (ACS) be screened for diabetes and has recently recommended the use of glycosylated hemoglobin type A1c (HbA1c) as a screening tool in accordance with the World Health Organization. The aim of this study was to determine the frequency distribution of HbA1c above 6.5% as an indicator in the diagnosis of diabetes in patients with acute coronary syndrome.

Methodology: This descriptive study was performed on 77 patients admitted to 5Azar Hospital in Gorgan due to ACS. Patients were studied for demographic and clinical characteristics, as well as laboratory parameters including blood glucose on admission and during hospitalization, HbA1c, cardiac troponin Creatine Kinase MB (ckMB). Data were analyzed using SPSS v.18 software using the Chi-square test.

Results: Most patients were male (58.4%), had no drug and cigarette abuse (76.6%) had no family history of the disease (59.7%). The 54.55% of the studied patients had HbA1c $\geq$ 6.5% (54.55%). None of the clinical, demographic laboratory indices differed among patients based on the distribution of HbA1c $\geq$ 6.5% ($p < 0.05$).

Conclusion: Considering that more than half of the patients with ACS in this study had HbA1c in diabetics level but without a history of diabetes, it seems that a significant percentage of patients with ACS become aware of their diabetes for the first time at the time of admission due to acute cardiac symptoms.

KEYWORDS

Type 2 diabetes, glycosylated haemoglobin, acute coronary syndrome, cardiovascular disease, screening

Copyright © 2025 Moghadam et al. This is an open-access thesis summary distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

KEY CONTRIBUTIONS

The presence of cardiovascular risk factors even without a history of diabetes alarms about HbA1c screening.



FUTURE DIRECTIONS

It is suggested to evaluate and compare the two-year, three-year five-year outcomes of patients with ACS based on the HbA1c cut-off.

ACKNOWLEDGMENT

We hereby thank the participants in the study and also we thank the research ethics committee of Golestan University of Medical Sciences.

DECLARATION LETTER

Subject: Declaration of Intent to Publish Thesis Summary in Science Digest

Dear Editor,

I, S. Mehran Hosseini, hereby declare on behalf of all the authors involved in the research, that we have reached a unanimous agreement to publish the summary of our thesis, titled "The Study of Frequency Distribution of HbA1c ≥ 6.5 Percent in Patients with Acute Coronary Syndrome in 5Azar Medical and Education Center of Gorgan in 2020" in Science Digest.

This research was conducted at the Department of Physiology, Medical Faculty, Golestan University of Medical Sciences, Iran, under the supervision of S. Mehran Hosseini, during the academic year 2022. The study represents the culmination of Pardis Alizade Moghadam's M.Sc. research project and we are excited to share the key findings with the global scientific community through the esteemed platform of Science Digest.

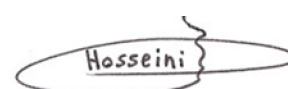
This declaration confirms that all co-authors have been made aware of and have consented to the publication of the thesis summary in Science Digest. Furthermore, we affirm the accuracy and completeness of the information provided in the submission.

Thank you for considering our work for publication.

Sincerely,

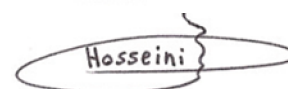
Author 1: Pardis Alizade Moghadam

Signature: Per Pro



Author 2: Shahram Moghaddam

Signature: Per Pro



Author 3: S. Mehran Hosseini

Signature:

