Low HDL levels as a major risk factor of acute myocardial infarction

Abstract

Introduction: Cardiovascular illness (CVD) is the main source of death around the world, which has turned into an overall general medical condition. Intense myocardial dead tissue (AMI) is a typical clinical basic disease. **Objectives:** The basic aim of the study is to analyse the low HDL levels as a major risk factor of acute myocardial infarction in Pakistan. **Material and methods:** This cross sectional study was conducted in Ghazi Khan Medical College and DHQ Hafizabad during June 2021 to November 2021. The study was conducted according to the ethical committee of the hospital. The data was collected from 100 patients of both genders. **Results:** The information was gathered from 100 patients of the two sexes. The mean age was 45± 5.46 years. The extent of male subjects was higher in bunches with high TG levels, while the distinction in age was not measurably critical. **Conclusion:** It is concluded that low HDL level is noted to be present in a high percentage of acute myocardial infarction patients and can be a major risk contributor

Introduction

Myocardial infarction (MI) remains a leading cause of death worldwide. An acute MI happens when myocardial ischemia surpasses a basic edge, normally because of an intense plaque burst in the coronary courses, and the cell course of occasions overpowers myocardial cell fix systems prompting myocardial cell harm. Myocardial ischemia happens because of plaque develop in the coronary veins, an infection officially known as atherosclerosis or coronary supply route illness (CAD) [1]. Breaking of weak atherosclerotic plaque follows a time of ceaseless plaque destabilization or potentially plaque development due to different patho-organic cycles. Plaque substance are encased inside a settling sinewy cap that forestalls

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Comment [RR1]: Standard expansion of CVD to be written

Comment [RR2]: Please rewrite the sentence for proper understanding

Comment [RR3]: Correct expansion for standard abbreviation to be mentioned

Comment [RR4]: Very broad term, proper area/Hospital to be mentioned

Comment [RR5]: Please comment on all the subheading of materials and methods briefly

Comment [RR6]: Please rewrite the sentence for proper understanding

Comment [RR7]: Name the parameters of the data collected. Write the name of the investigations done

Comment [RR8]: Incomplete, Comment on the study parameter is not written

Comment [RR9]: Meaning is not clear

Comment [RR10]: Role of HDL-C in MI to be mentioned
Need of the study to be mentioned

Comment [RR11]: Meaning not clear

Comment [RR12]: Please rectify whether it is infection or inflammation

Comment [RR13]: Please write appropriate expansion for standard abbreviation

openness of the thrombogenic center to the circulatory system, and debilitating of this cap can hence prompt plaque crack and MI [2].

Cardiovascular illness (CVD) is the main source of death around the world, which has turned into an overall general medical condition. Intense myocardial dead tissue (AMI) is a typical clinical basic disease. In the beyond couple of many years, huge headway has been made in understanding, forestalling and controlling this sickness [3]. Specifically, the ascent of reperfusion treatment essentially decreased mortality and worked on the anticipation of AMI. As of late, the job of low thickness lipoprotein thickness (LDL-C) in the pathogenesis of atherosclerosis (AS) has drawn in much consideration [4]. Nonetheless, an ever increasing number of clinical preliminaries have uncovered that in the wake of controlling for deterministic gamble factors like LDL-C, the gamble for coronary illness (CHD) stayed, while the expansion in fatty oils (TG) was essentially related with the expansion in mortality, the rate of myocardial localized necrosis (MI) and the repeat pace of coronary course illness [5].

Aims and objectives

The basic aim of the study is to analyse the low HDL levels as a major risk factor of acute myocardial infarction in Pakistan.

Material and methods

This cross sectional study was conducted in Ghazi Khan Medical College and DHQ Hafizabad during June 2021 to November 2021. The review was led by the moral advisory group of the medical clinic. The information was gathered from 100 patients of the two sexes. The information was gathered from those patients who visited the OPD of the medical clinic routinely. TC level in serum was estimated utilizing the endpoint test technique. HDL-C and

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Comment [RR14]: Please reframe the sentence, difficult to understand the meaning

Comment [RR15]: Please write proper expansion for all the standard abbreviations used here

Comment [RR16]: Please write Proper expansion for standard abbreviation

Comment [RR17]: Meaning not clear

Comment [RR18]: Meaning not clear

Comment [RR19]: Please write Proper expansion for standard abbreviation

Comment [RR20]: Please write Proper expansion for standard abbreviation

Comment [RR21]: Please write Proper expansion for standard abbreviation

Comment [RR22]: Please write Proper expansion for standard abbreviation

Comment [RR23]: Please comment on Lipid profile estimated

Comment [RR24]: 1.Mention the reason for not comparing the cases with the control group
2.Lipid profile is included, not mentioned in objectives of the study
3.Mention by which method the Lipid profile parameters are estimated.
4.Write the expansions of the abbreviations of lipid parameters which are mentioned for the first time

Comment [RR25]: Mention what type of patients. Inclusion criteria, exclusion criteria.

Comment [RR26]: Acute MI cases will be admitted soon for the treatment, How the cases can be recruited from OPD? Acute cases will not visit the OPD routinely. Explain

LDL-C were estimated utilizing the immediate test technique. TG was estimated utilizing the GPO strategy. Non-HDL-C not set in stone by deducting serum HDL-C from serum TC.

Information were gathered utilizing the product Epidata 3.0 and examined utilizing measurable programming SPSS 20.0. Estimation information were communicated as mean ± standard deviation (SD). Intergroup examination was led utilizing investigation of fluctuation.

Results

The information was gathered from 100 patients of the two sexes. The mean age was 45±5.46 years. The extent of male subjects was higher in bunches with high TG levels, while the distinction in age was not measurably critical. With the expansion in TG level, the extent of individuals with a background marked by smoking expanded, weight file (BMI), SBP, DBP, FBG, UA and the pace of MI expanded, while HDL-C level step by step diminished, and the distinctions were all measurably huge. Contrasts in TC and LDL-C levels were not genuinely huge.

Table 1: Logistic regression analysis to identify predictors of periprocedural myocardial infarction

Variables	Univariate		Multivariate	
	OR (95% CI)	*p* value	OR (95% CI)	*p* value
Age	1.01 (0.97–1.04)	0.75	1.01 (0.96–1.05)	0.79
Sex, male	0.66 (0.26–1.67)	0.38		
Body mass index	0.98 (0.89–1.09)	0.73		
Current smoking	1.63 (0.70–3.82)	0.26	2.46 (0.87–6.95)	0.090
Hypertension	0.77 (0.34–1.75)	0.53		
Diabetes mellitus	0.77 (0.37–1.58)	0.48	0.65 (0.27–1.58)	0.34
eGFR	0.99 (0.97–1.01)	0.48	0.98 (0.96–1.01)	0.22
LDL cholesterol	1.00 (0.99–1.02)	0.63		

Comment [RR27]: Serum levels of the lipid parameters not mentioned

Comment [RR28]: Repeated many times

Comment [RR29]: Meaning not clear

Comment [RR30]: 1.Write the expanded form of the abbreviation if mentioned for the first time
2.These are not mentioned in materials and methods

Comment [RR31]: Results (significance of OR value/p value not explained
Many parameters have suddenly appeared in this table

HDL cholesterol	0.97 (0.93–1.00)	0.058		
HDL2 cholesterol	0.97 (0.92–1.02)	0.26		
HDL3 cholesterol	0.86 (0.76–0.98)	0.018	0.86 (0.74–0.99)	0.038
Triglyceride	1.00 (0.99–1.01)	0.16		
C-reactive protein	1.18 (0.90–1.54)	0.22		
Total stent length	1.06 (1.01–1.10)	0.011	1.04 (0.99–1.09)	0.16
Total inflation time	1.01 (1.00–1.01)	0.014	1.00 (0.99–1.01)	0.22

Discussion

In a broadly refered to meta-examination of four enormous investigations (absolute number of people contemplated: 15,252), a 1 mg/dL increment of HDL-C levels was accounted for to be related with a 2%-3% diminished CVD risk [6]. Niacin, by and by endorsed with a statin, is one of the most regularly involved pharmacological treatment pointed toward bringing HDL-C focuses up in patients with such dangers. At a pharmacological portion of ~1.5-2 g each day, Niacin is perhaps the most intense specialist accessible for this reason. Niacin likewise decreases all proatherogenic lipids and lipoproteins, including absolute cholesterol, TGs, exceptionally low-thickness lipoprotein, LDL, and lipoprotein [7]. Notwithstanding its prevalence, the viability of niacin has come into question in ongoing examinations. Two particular examinations, Atherosclerosis Intervention in Metabolic Syndrome with Low HDL/High Triglycerides and Impact on Global Health Outcomes (AIM-HIGH) and Heart Protection Study 2 - Treatment of High-thickness Lipoprotein to Reduce the Incidence of Vascular Events (HPS2-THRIVE) were pointed toward assessing whether adding the cutting edge, stretched out discharge niacin details to statin treatment gives steady advantage over statin treatment alone as far as cardiovascular essential occasions in patients with laid out CAD [8]. These clinical preliminaries concentrated on explicit populaces of stable ischemic coronary illness patients, barring patients with MI or those with critical remaining blended dyslipidemia not treated with ideal portions of serious statin treatment [9]. Both the AIM-HIGH and HPS2-THRIVE clinical preliminaries were halted rashly because of an absence of

Comment [RR32]: The values of the present study is not compared with other studies
Treatment part is not the objective of the present study, but whole discussion is on effect of Niacin/statin

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gainful impacts and a failure to meet essential endpoints of decreased cardiovascular illness and MI risk [10].

Conclusion

It is concluded that low HDL level is noted to be present in a high percentage of acute myocardial infarction patients and can be a major risk contributor

References

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