Association between Dairy Intake and Coronary Artery Stenosis among Adults Living In Central Iran: A Cross-Sectional Study

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ABSTRACT

Introduction: Cardiovascular diseases (CVD) account for approximately one-third of all deaths. Diet is one of the most important factors affecting healthy life expectancy, as it is related to the onset of CVD and various chronic diseases related to lifestyle. Most current evidence suggests that dairy products have a neutral or positive effect on human CVD. Specific types of dairy products may have varying associations with atherosclerotic CVD. Research has shown a positive association between high-fat milk consumption and an increased risk of coronary heart disease. The findings in this area could benefit from greater consistency. Therefore, this study aimed to explore the relationship between dairy intake and coronary artery stenosis.

Methods and Materials: This cross-sectional study recruited 720 patients (aged 35-75 years) who met the inclusion criteria and were referred for angiography between July 2020 and November 2021 to Afshar Hospital, a central heart disease hospital in Yazd City, Iran. To assess the presence and intensity of coronary artery disease, we used the Gensini and Syntax scores. Data on general information, dietary food, and other variables were gathered by trained interviewers using specific questionnaires. Dietary intake was evaluated by a validated 178-item semi-quantitative food frequency questionnaire that has been applied for the past year. High-fat dairy products include high-fat milk, strained yogurt, cream cheese, ice cream, curd, and dough. Low-fat dairy products include low-fat milk, low-fat yogurt, and chocolate milk. Logistic regression was used in crude and adjusted models to investigate the relationship between dairy consumption and coronary artery stenosis.

Results: There were no significant associations between low-fat dairy intake and the odds of Gensini and SYNTAX scores for the upper versus lower tertile among the entire population in both the crude and adjusted models. Also, for high-fat dairy intake, there was no significant association between the odds of genuine and syntax scores for the upper versus lower tertile among the entire population in both the crude and adjusted model. In subgroup analyses by BMI, neither low-fat nor high-fat dairy intake was associated with an increased likelihood of coronary artery stenosis for the upper versus lower tertile in the crude and adjusted model.

Conclusion and Discussion: The present study found no significant association between high and low-fat dairy intake and the odds of coronary artery stenosis. Prospective studies are needed for more investigation.