

DIABETES MELLITUS AND CARDIOVASCULAR RISK: A LITERATURE REVIEW

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RESUMO

Diabetes mellitus, especially type 2, is one of the most relevant chronic diseases today due to its high prevalence and significant impact on morbidity and mortality. Diabetic individuals have a higher risk of developing cardiovascular diseases, such as coronary artery disease, heart failure, and diabetic cardiomyopathy, as well as a higher incidence of premature death. This association stems from interrelated pathophysiological alterations, including insulin resistance, chronic hyperglycemia, low-grade inflammation, oxidative stress, and endothelial dysfunction, which contribute to the progression of atherosclerosis and structural and functional changes in the myocardium. The objective is to analyze the current evidence on the relationship between diabetes mellitus and the increased risk of cardiovascular diseases, contributing to the improvement of early diagnosis and metabolic control. A systematic review was conducted in the PubMed database using the descriptors "Type 2 Diabetes Mellitus" AND "Cardiovascular Risk" AND "Cardiovascular Risk Factors" AND "Risk Assessment". The following filters were applied: studies published in the last five years, systematic reviews and meta-analyses, full text available, studies in humans, and English language. Inclusion criteria selected articles related to the proposed theme, excluding those that did not meet the research objectives. In the end, 13 studies comprised the analysis. The association between Diabetes Mellitus and increased cardiovascular risk can be explained by multiple mechanisms acting simultaneously. Chronic hyperglycemia promotes endothelial injury, increased oxidative stress, and persistent inflammatory activation, contributing to the development and progression of atherosclerosis. Additionally, metabolic alterations inherent to diabetes can directly compromise the myocardium, favoring cardiac remodeling, contractile dysfunction, and a greater predisposition to heart failure, even in the absence of evident coronary artery disease. Thus, the findings reinforce that the cardiovascular impact of diabetes does not depend exclusively on glycemic levels, but also on the interaction with other risk factors, highlighting the need for a comprehensive and continuous clinical approach. Diabetes Mellitus represents a significant risk factor for the development of cardiovascular diseases, being responsible for a substantial increase in morbidity and mortality. Therefore, it is crucial to adopt strategies that involve early diagnosis, rigorous metabolic control, and integrated management of risk factors in order to prevent cardiovascular complications and optimize patient prognosis.

Palavras-chave: Type 2 Diabetes Mellitus; Cardiovascular Risk; Cardiovascular Risk Factors.