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EDITORIAL

Diet Quality and Cardiovascular Health

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Editorial referring to the article: Diet Quality and Associated Factors in Atherosclerotic Cardiovascular Disease Patients with and without Diabetes at a Specialized Outpatient Clinic in the City of Pelotas, Brazil

The association between diet quality and cardiovascular health has been extensively investigated over the last few years. The Global Burden of Disease Study[1] showed that, in 2017, dietary risk factors such as high intake of sodium, low intake of whole grains, and low intake of fruits were responsible for 11 million deaths across 195 countries.

Petersen et al.[2] reviewed different ways to evaluate diet quality, which is a term used to quantify how healthy a particular dietary pattern is. It is clear that assessing and encouraging individual dietary components such as specific foods, nutrients, or bioactive compounds alone is not enough. Therefore, the totality of the diet is being increasingly assessed, since it has a greater impact on health outcomes.

Based on the available evidence, the 2020 Dietary Guidelines Advisory Committee[3] concluded that there is strong and consistent evidence that dietary patterns associated with decreased risk of cardiovascular disease (CVD) are characterized by higher intake of vegetables, fruits, whole grains, low-fat dairy, and seafood, as well as lower intake of red and processed meat, refined grains, and sugar-sweetened foods and beverages.

Thus, current dietary guidance for general health and CVD risk reduction[4,5] are focused on achieving a high-quality, heart-healthy dietary pattern, such as Mediterranean, DASH, or plant-based diets. The same recommendations can also be found in the food guide for the Brazilian population,[6] which proposes the NOVA food classification system and encourages dietary patterns based on unprocessed and minimally processed foods, rather than isolated nutrient recommendations.

The traditional Mediterranean diet is based on regional foods with an abundance of minimally processed foods, such as beans, nuts, seeds, whole grains, and fresh fruit.[7] Olive oil is the main source of fat, and consumption of low-fat dairy products is low to moderate. In addition, the consumption of red meat is low.

The PREDIMED study,[7] a three-arm parallel randomized primary prevention trial, showed that a Mediterranean diet with extra virgin olive oil or nuts reduced the risk of a composite CVD outcome. They demonstrated that small changes in diet quality confer clinically relevant CVD risk reductions.

When analyzing secondary data from the Global Burden of Disease Study 2019,[8] Machado et al.[9] found that an unhealthy diet was the major modifiable risk factor for noncommunicable diseases in Brazil, such as CVD, diabetes mellitus, and neoplasms. Thus, the three main dietary risk factors identified as contributing to the burden of noncommunicable diseases were high red meat consumption, high sodium consumption, and low intake of whole grains.

Gorgulho et al.[10] investigated dietary patterns associated with subclinical atherosclerosis, using data from the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil). During this cross-sectional analysis, they identified the following three dietary patterns: convenience foods (processed meat, snacks, candies, potatoes and tubers, sugary beverages, breads, and cakes); plant-based and dairy foods (fruits, vegetables, oatmeal, milk, yogurt, and nuts) and the traditional Brazilian food pattern (rice, legumes, and meats). The

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study concluded that there was a positive association between convenience food patterns and atherosclerotic calcification, while the traditional Brazilian food pattern had a protective role against it.

In this issue of the *International Journal of Cardiovascular Sciences*, Dobke et al.,[11] in a cross-sectional study using data from a randomized clinical trial entitled "Efeito do Programa Alimentar Brasileiro Cardioprotetor (DICA Br)",[12] evaluated diet quality of patients with atherosclerotic cardiovascular diseaseCVD, applying the Revised Diet Quality Index (IQD-R). After analyzing data from 80 patients from Pelotas, Brazil, they found that the items "whole grains," "dark green and orange vegetables," "total fruits," and "whole fruits" had the lowest IQD-R scores, while the items "meats, eggs, and pulses" and "total cereals" had the highest.

Even though there is a clear association between diet quality and cardiovascular prevention, there is still a gap between what the guidelines recommend and the population's actual dietary pattern.

Therefore, interventions are necessary at the individual, government, and community levels. Evidence suggests that strategies to improve diet quality at the population level will have substantial health benefits and be cost-effective, given that it is the main modifiable risk for CVD. High diet quality is a unifying component of all dietary recommendations and should be the focus of efforts to promote general and cardiovascular health.

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