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MENOPAUSE AND CARDIOVASCULAR RISK

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Abstract: Cardiovascular disease is the leading cause of death in women over 50 years of age. Before menopause, cardiovascular risk (CVR) is much lower than that of men; after menopause, the risk increases, apparently related to estrogen deficiency, which is associated with a higher prevalence of multiple CVR factors (diabetes mellitus, dyslipidemia, metabolic syndrome, unfavorable changes in weight and body fat distribution, insulin sensitivity and sympathetic tone, among others). In fact, the National Cholesterol Education Program (NCEP) recognized postmenopause as a CVR factor, assigning it the same weight as being male. The question that remains to this day is whether Menopausal Hormonal Therapy (MHT) is able to reverse the increased cardiovascular risk. **Objective:** to determine whether there is a difference in coronary risk in women with and without menopause. **Methodology:** Observational, cross-sectional, analytical and prospective study of 108 women during the year 2022, aged 35 to 74 years with and without menopause using a Framigham test to assess the relationship to coronary risk. **Results:** It was observed that postmenopausal women with obesity have a higher coronary risk score compared to their premenopausal counterparts. **Conclusions:** The difference in scores between postmenopausal and premenopausal women indicates that menopause may be a significant factor in increasing the risk of coronary heart disease.
Keywords: Menopause, Coronary Risk, Framingham Test.

INTRODUCTION

The incidence of cardiovascular diseases (CVD) has shown a worrying upward trend globally, representing one of the main causes of morbidity and mortality in adults. Within this context, the coronary risk associated with metabolic conditions such as central obesity and type 2 diabetes mellitus (DM2) has acquired particular relevance, especially in female populations differentiated by their menopausal status (Dal Canto et al., 2019). Women, when transitioning from premenopause to postmenopause, experience significant hormonal changes that can influence the cardiovascular risk profile (CRC), increasing the susceptibility to developing CVD (Chaves & Muñoz, 2021; Hurtado et al., 2022). Central obesity, characterized by excessive accumulation of fat in the abdominal region, has been identified as an independent risk factor for the development of coronary heart disease, even more so when it coexists with DM2. This synergy between central obesity and T2DM increases the risk of atherosclerosis and, therefore, of coronary events, highlighting the need to investigate its impact on pre- and postmenopausal women (Quilligana-Caisaguano & Cevallos-Teneda, 2024; Gonzalez, 2024).

The present research aims to compare coronary risk in pre- and postmenopausal women with central obesity and T2DM, based on the physiological, metabolic and hormonal changes associated with menopause and how these can influence the progression of cardiovascular pathologies. Several studies have shown that menopause constitutes an additional risk factor for the development of CVD in women, independently of other traditional factors (Figueroa & Arguello., 2020: Urbina, 2022). In this sense, the aim is to provide evidence that allows for a better understanding and management of the specific coronary risk of this population group, thus contributing to the

development of more effective prevention and treatment strategies.

DESCRIPTION OF THE METHOD

A cross-sectional, analytical, observational and descriptive study was carried out in 2022 with patients from the family medicine unit of San Francisco de Campeche. The objective was to compare coronary risk between women with diabetes, with and without menopause, who also had central obesity. Anthropometric measurements, glycosylated hemoglobin, blood pressure and lipids were analyzed, using the Framingham test to estimate the risk of cardiovascular disease at 10 years. 108 female patients, aged 35 to 74, with type 2 diabetes and central obesity participated.

FINAL COMMENTS

SUMMARY OF RESULTS

This study included 70 premenopausal women and 38 postmenopausal women, all diagnosed with diabetes and obesity. The mean age of premenopausal women was 50 years with a standard deviation of 6.5 years, while postmenopausal women had an average age of 65.3 years with a deviation of 4.5 years. Regarding toxic habits, it was found that 11.4% of premenopausal women were smokers and 5.7% consumed alcohol. Regarding anthropometric characteristics and metabolic control, there were no significant differences between the groups of premenopausal and postmenopausal women. There is not enough statistical evidence to reject the null hypothesis in the analysis performed. This implies that the differences or effects observed in the study are not statistically significant, and could be attributed to random variation between the data analyzed. Overall, this result suggests that there is no strong or significant association between the variables studied according to the conventional criterion of $p < 0.05$.

When analyzing the results of the determination of systolic blood pressure and serum lipids in pre- and postmenopausal women, no statistically significant evidence was found to reject the null hypothesis.

The results of the Framingham test indicated that postmenopausal patients have a significantly higher risk of experiencing coronary events compared to premenopausal patients. The higher mean score in the postmenopausal group in contrast to the premenopausal group suggests that menopause may be a factor contributing to increased cardiovascular risk.

The Framingham test is a risk assessment tool that considers various factors, including age, blood pressure, cholesterol levels, smoking habits, and presence of diabetes, to estimate the probability of developing cardiovascular disease in the next 10 years. A higher score reflects a higher risk.

This finding underscores the importance of more intensive surveillance and management of cardiovascular risk factors in postmenopausal women to prevent coronary events, emphasizing the significant impact that menopause has on women's cardiovascular risk profile.

CONCLUSIONS

No Significant Differences in Anthropometry and Metabolic Control: Body mass index (BMI), waist-hip ratio (WHR), and HbA1c values between premenopausal and postmenopausal women showed no statistically significant differences, suggesting that the transition from premenopause to postmenopause alone does not significantly affect these parameters in women with diabetes and obesity. No Significant Differences in Blood Pressure and Serum Lipids: Similarly, systolic blood pressure, HDL-C, and total cholesterol values between both groups showed no statistically significant differences.

This indicates that, in terms of blood pressure and lipid profile, menopause does not have a clear differential impact in this specific group of women. Increased Cardiovascular Risk Postmenopause: Despite the lack of significant differences in anthropometric and metabolic parameters, the Framingham test revealed a significantly higher cardiovascular risk in postmenopausal women compared to premenopausal women. This suggests that other factors related to postmenopause may be contributing to the increased cardiovascular risk. Obesity is no longer seen as a purely aesthetic problem, and is now seen as a major challenge for health personnel, and is now a problem that must be addressed in the different health systems of both developed and developing countries.

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