

METABOLIC SYNDROME AND ITS IMPACT ON QUALITY OF LIFE: UNIVERSITY EXTENSION AS A PREVENTION STRATEGY

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Abstract: Metabolic syndrome is a pathological condition determined by a complex set of risk factors (abdominal obesity, hypertension, insulin resistance and hyperlipidemia) related to an increased risk of developing cardiovascular diseases and associated with a worse quality of life. The high prevalence of this disease and its components in Brazil results in an important public health problem. The objective of this work is to analyze the importance of a university extension as a metabolic syndrome prevention strategy through a brief review of the literature on this topic. Bearing in mind the relevance of a healthy lifestyle, the “Operação Corra do Bisturi” extension demonstrates an important contribution by promoting the detection of risk factors for metabolic syndrome and raising awareness in the community regarding the importance of healthy habits.

Keywords: Metabolic Syndrome. Quality of life. Prevention.

INTRODUCTION

The metabolic syndrome (MS) consists of a set of metabolic abnormalities (high blood pressure, dyslipidemia, central obesity and insulin resistance) that increase the risk of cardiovascular diseases and type 2 diabetes mellitus (ALBERTI et al., 2009). This new noncommunicable disease (NCD) is a multifactorial phenomenon and its prevalence is determined by the interaction of sociodemographic variables (age, education, marital status and housing region), behavioral variables (self-perception of health) and comorbidities (stroke, CVD, weight, depression and CRF) differently between genders (RAMIRES et al., 2018).

It has been demonstrated that the prevalence of metabolic syndrome is increasing worldwide and it is estimated that the adult population is 20 to 25%, largely the result of greater obesity and sedentary lifestyles, configuring a global

epidemic (ALBERTI et al., 2009). Despite the methodological differences and the lack of consensus between the metabolic syndrome criteria, there is a high prevalence of metabolic syndrome in the healthy adult Brazilian population, representing an important public health problem (de CARVALHO VIDIGAL et al., 2013).

The metabolic syndrome confers a 5-fold increase in the risk of developing type 2 diabetes mellitus (DM2) and a 2-fold increase in the risk of developing cardiovascular disease, such as myocardial infarction and stroke, over the next 5 to 10 years (ALBERTI et al., 2009). In addition, a growing body of evidence has shown a significant association between metabolic syndrome and worsening quality of life (SABOYA et al., 2016). In addition to these effects, GHESHLAGH, PARIZAD and SAYEHMIRI (2016) demonstrated a significant relationship between metabolic syndrome and depression.

In view of this, prevention strategies and patient education about the health risks of the metabolic syndrome are of paramount importance for the control of this epidemic. In this context, the identification of risk factors and awareness of lifestyle changes proposed by the university extension project “Operação Corra do Bisturi” makes a significant contribution to controlling the epidemic under discussion.

METHODOLOGY

The present work consists of an experience report carried out from the experience in the university extension “Operação Corra do Bisturi”, under the guidance of Dr. Cristina Micheletto Dallago and linked to the Academic League of Surgery and Anatomy of the graduation course in medicine at “Universidade Estadual do Ceará”, whose preparation was carried out through a brief bibliographical review about the theme

discussed. The reviewed literature comprises articles published in the SciELO and PubMed electronic databases and references cited in the articles found.

The purpose of the extension in question was to disseminate the concept of metabolic syndrome and its complications and to make the population aware of the importance of healthy habits in order to prevent such complications and avoid the need for a surgical approach. The activities were carried out at `Universidade Estadual do Ceará`, in health units and in public spaces. The periodicity was of a monthly intervention plus the performance of other interventions according to the opportunity of commemorative dates of health or of external partnerships that carried out some type of social action.

The methodologies used were: oral presentations on the metabolic syndrome and its complications; distribution of pamphlets addressing diabetes, dyslipidemia, obesity and hypertension; performance of procedures (physical examination, calculation of Body Mass Index, blood glucose test, blood pressure measurement and waist circumference measurement).

RESULTS AND DISCUSSION

Metabolic syndrome, according to the synthesis of classification criteria developed by different organizations, consists of the presence of three of the following risk factors:

- Elevated waist circumference (varies according to the analyzed population)
- Elevated triglycerides (≥ 150 mg/dL) or drug treatment for elevated triglycerides
- HDL cholesterol less than 40 mg / dL in men or less than 50 mg / dL in women
- Elevated fasting blood glucose (≥ 100 mg/dL)
- Systolic blood pressure ≥ 130 mmHg and/or diastolic ≥ 85 mmHg (ALBERTI et al., 2009).

According to Ramires et al. (2018), only 23.8% of the Brazilian population does not have any metabolic syndrome component and 67.3% have between one and two components to configure this diagnosis, which demonstrates a high number of individuals at risk of developing metabolic syndrome. This high prevalence of metabolic abnormalities reflects an increased risk of developing cardiovascular disease and, consequently, an increase in morbidity and mortality and the impact on the country's health system (RAMIRES et al., 2018).

The M.S. negatively influences various body systems. Insulin resistance causes microvascular damage, which predisposes patients to develop hypertension and atherosclerotic disease. Hypertension, in turn, affects various body functions, causing peripheral vascular disease, heart disease and leading to kidney failure. These combined effects, as well as dyslipidemia, can result in ischemic heart disease. Metabolic syndrome can also trigger liver damage, causing steatosis, which can progress to nonalcoholic steatohepatitis (NASH), fibrosis, cirrhosis, and hepatocellular carcinoma. Furthermore, GHESHLAGH, PARIZAD and SAYEHMIRI show that metabolic syndrome is related to the development of depression.

Many studies demonstrate that intervention on the lifestyle of patients, promoting healthy lifestyle habits, has a beneficial effect on metabolic parameters, in addition to having a better cost-benefit ratio (GARRALDA-DEL-VILLAR et al., 2019; VANWORMER et al., 2017; SABOYA et al., 2017). In addition to the reduction in the risk of metabolic syndrome, the adoption of a healthy lifestyle is also associated with improved quality of life (SABOYA et al., 2017).

It is known that the involvement of government entities and health professionals is essential in controlling metabolic syndrome.

However, the participation of civil society in raising awareness about the impact of metabolic syndrome on health and quality of life is of paramount importance (SAKLAYEN, 2018).

In this sense, university extension, understood as a process that promotes a transforming interaction between the university and other sectors of society, is an important strategy to meet this social demand (FORPROEX, 2001). Specifically, the extension “Operação Corra do Bisturi” is an important means of health promotion and education by making the population aware of metabolic syndrome and its components, promoting a healthy lifestyle and reducing preventable complications.

Thus, through appropriate history, physical examination, patient education, and analysis

of contributing factors, interventions can significantly alter the trajectory of disease development (SWARUP; ZELTSER, 2019).

FINAL CONSIDERATIONS

This study reports and highlights the importance of a university extension as a strategy to prevent metabolic syndrome, its complications and the need for the patient to undergo a surgical intervention as an extreme treatment measure. It was understood that this condition, worthy of the attention of public entities, is associated with increased morbidity and mortality, generating a negative impact on the health system. Thus, investing in preventive measures, emphasizing lifestyle changes, is an effective and cost-effective measure.

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