

Consequences of the Metabolic Syndrome in Gynecology

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Received: December 15, 2017; **Published:** January 02, 2018

Metabolic syndrome includes a combination of clinical signs that, at the same time, are risk factors for cardiovascular disease, and among which include abdominal obesity, atherogenic dyslipidemia (increased triglycerides and reduction of high density lipoproteins and cholesterol), hypertension, and increased blood glucose. This syndrome is considered an important public health problem, because it exponentially multiplies the prevalence of type 2 diabetes, cardiovascular diseases, and even the development of cancer.

Insulin resistance, or decreased sensitivity to insulin in the uptake and metabolism of glucose in peripheral tissues, is of great importance in the development of the Metabolic Syndrome. In the field of gynecology and obstetrics, there are several diseases or syndromes in which there may be insulin resistance with compensatory hyperinsulinemia: polycystic ovarian syndrome, hyperandrogenism, post-menopause, female sexual dysfunction, breast cancer, gestational hyperglycemia and induced hypertension for pregnancy.

Because of its prevalence in the total female population, menopause is one of the most important. The transition experienced by women during menopause is associated with the development of characteristics typical of the metabolic syndrome, among which are: increased abdominal central fat, impaired lipid profile and insulin resistance. For this reason, the prevalence of Metabolic Syndrome multiplies exponentially with menopause.

One of the main reasons underlying the development of metabolic syndrome in menopause are alterations in lipid metabolism due to estrogen deficiency. To which we must add the secondary effects to the hormonal changes in the distribution of body fat, the action of insulin, the arterial wall and fibrinolysis that produce a significant reduction in the health levels of women. These factors contribute to increase the prevalence of Metabolic Syndrome, which, associated with the worsening of the metabolic profile, can contribute to the risk of presenting cardiovascular and inflammatory diseases. The changes described above during menopause force us to recognize the importance of identifying those women who develop signs of Metabolic Syndrome, which should be treated early and multidisciplinary. These interventions range from lifestyle modifications (reducing tobacco consumption and increasing the practice of physical activity) to the implementation of pharmacological measures.

The estrogen deficiency due to menopause is associated with an increased risk of suffering this pathology, since these hormones have a cardioprotective and anti-inflammatory function in women since it preserves the endothelial function of the arteries, decreases cholesterol and viscosity of the blood and minimizes the risk of thrombosis. Women with menopause usually have significant reductions in HDL cholesterol and LDL cholesterol increases compared to premenopausal women.

Currently, there is great controversy about the use of hormone replacement therapy. While some studies have shown that estrogen treatment in menopausal women reduced the development of metabolic syndrome and cardiovascular risk, others affirmed the opposite, that is, that hormone replacement therapy does not reduce coronary events and also increases the incidence of stroke and venous thromboembolic disease. These negative effects to the hormonal treatment are due to the fact that it increases the levels of triglycerides, and promotes coagulation by factor VII, the fragments of prothrombin 1 and 2 and the ascent of fibrinopeptide-A, besides increasing the levels of the protein reactive-C.

Despite this, other studies have argued that endothelial dysfunction can be improved with replacement of estrogen at physiological concentrations during the early stage of atherosclerosis. However, with more advanced atherosclerotic lesions, hormone therapy is likely to lead to inflammatory and hemostatic changes, which favor the progression and instability of the plaque. The guidelines of the American Heart Association (AHA), the European Society of Hypertension and the European Society of Cardiology, indicate that hormone replacement therapy should not be prescribed for the prevention of heart disease or stroke.

Due to all this, and due to the deep and serious impact that the metabolic syndrome has on women, we must put our efforts in the prevention of this problem from the different health specialties with special interest for nursing, physiotherapy, gynecology, cardiology and endocrinology.

Volume 7 Issue 1 January 2018

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