



REVIEW ARTICLE

Hypothyroidism in menopausal women, prevalence and diagnosis

Hipotiroidismo en mujeres menopáusicas, prevalencia y diagnóstico

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ABSTRACT

Introduction: hypothyroidism in menopausal women in a common endocrinological disorder. A good diagnosis requires biochemical studies to determine the function of thyroid hormones and the correct application of the clinical method.

Objective: to describe the prevalence and diagnosis of hypothyroidism in menopausal women.

Methods: a bibliographic review of the updated scientific literature was carried out. Information was obtained through Web of Science, Scielo, ScienceDirect and PubMed. The following descriptors were introduced: hypothyroidism, endocrine disorders, hypothyroidism in menopausal women; and their respective translations into English. A total of 16 bibliographic references were used.

Conclusions: the establishment of the diagnosis of hypothyroidism in menopausal women requires taking into consideration the detected levels of thyroid hormones, whose decrease constitutes the main cause of the disease.

Keywords: Hypothyroidism; Menopause; Women.

RESUMEN

Introducción: el hipotiroidismo en mujeres menopáusicas es un trastorno endocrinológico común. Un buen diagnóstico exige indicar estudios bioquímicos para determinar la función de las hormonas tiroideas y aplicar del modo correcto el método clínico.

Objetivo: describir la prevalencia y el diagnóstico de hipotiroidismo en mujeres menopáusicas.

Métodos: se realizó una revisión bibliográfica de la literatura científica actualizada. Se obtuvo la información a través de Web of Science, Scielo, ScienceDirect y PubMed. Se introdujeron los descriptores: hipotiroidismo, trastornos endocrinos, hipotiroidismo en mujeres menopáusicas; y sus respectivas traducciones al idioma inglés. Se utilizaron un total de 16 referencias bibliográficas.

Conclusiones: el establecimiento del diagnóstico de hipotiroidismo en la mujer menopáusica requiere tener en consideración los niveles detectados de hormonas tiroideas, cuyo descenso constituye la principal causa de la enfermedad.

Palabras clave: Hipotiroidismo; Menopausia; Mujeres.

INTRODUCTION

In daily clinical practice hypothyroidism is one of the most frequent endocrinological conditions. It is a gradual and chronic disease.⁽¹⁾ It is defined as hyposecretion of hormones by the thyroid gland.⁽²⁾

It is more frequent in women than in men. Particularly menopausal women are affected and it is related to the changes experienced by women in this period. The disease has subclassifications: primary and subclinical.⁽³⁾

In primary hypothyroidism, thyroid stimulating hormone (TSH) levels increase and thyroxine (T4) decreases simultaneously. In the case of subclinical hypothyroidism, there is an increase in TSH and normal free T4.⁽³⁾

According to Chukur et al,⁽⁴⁾ all women of perimenopausal age with one or more general symptoms of hypothyroidism should be screened for TSH and T4. These laboratory studies are essential in the subclinical form of the condition, whose prevalence is 12 % to 18 % in perimenopausal women worldwide.⁽³⁾ In Ecuador, hypothyroidism, despite occurring in 8 % of the adult population, is very prevalent in women of an age compatible with the climacteric period; and it increases directly and proportionally with increasing age.⁽⁵⁾ The significant prevalence of this endocrinological disease in women during the climacteric period calls for studies that expose the main factors conducive to the development of this condition.

The important prevalence of this endocrinological disease in the female sex during the climacteric period demands the realization of studies that expose the main factors that propitiate the development of the condition. There is a worldwide need to act on those factors that can be modifiable. Understanding the prevalence of the disease means outlining the health policies needed to reduce the indicators. The establishment of a timely diagnosis contributes to early clinical improvement and to a better quality of life in climacteric women.

Therefore, the objective of the present study was to describe the prevalence and diagnosis of hypothyroidism in menopausal women.

METHODS

A bibliographic review of the literature on the subject was carried out, with an update period of less than 5 years. The information was collected through an online search using Web of Science, Scielo, ScienceDirect and PubMed. The following descriptors were used: hypothyroidism, climacteric, menopause, endocrinology and their English translations. A total of 16 bibliographic references were selected on the basis of their relevance, pertinence and up-to-dateness. Theoretical level methods were used: analysis-synthesis and deduction-induction.

DEVELOPMENT

Menopause is a physiological process in women characterized by the complete cessation of menstruation, due to the fact that the ovarian follicles lose their capacity to produce estrogens and progesterone in the presence of the stimulus of follicle-stimulating and luteinizing hormones. During this period, women undergo a series of hormonal changes with repercussions on their state of health, which may express latent diseases or maintain other asymptomatic diseases.⁽⁶⁾

Most frequent clinical manifestations of hypothyroid women:

Women with hypothyroidism tend to present menstrual disorders (menometrorrhagia and oligomenorrhea). The thyroid gland is also very important for fetal development and for the maintenance of pregnancy, as it increases the probability of miscarriage.^(7,8)

Very frequent gynecological and obstetric alterations are described in hypothyroid women, as well as those related to mood (depression, fatigue, somnolence, asthenia and adynamia), dry skin and hair loss. For the purpose of the present study, no investigations were found with the same order of frequencies with respect to the signs and symptoms of hypothyroidism.⁽⁹⁾

For the clinic of the patients, the hormonal variables of the female sex must be taken into account, which lead to the realization of other questions associated with the subject such as the age of the first menstruation, finding that there were no significant differences between cases and controls. The theory points out within the hormonal factors that can be associated with the development of thyroid cancer, the late menarche.⁽¹⁰⁾

Other more associated endocrinological comorbidities

Blanco et al,⁽¹¹⁾ in their research described other endocrine comorbidities that may be associated in menopausal women in addition to hypothyroidism. The authors described grade II overweight (26,8 %) and obesity (46,5 %). Several studies show lower percentages, such as in the Spanish Association for the Study of Menopause (AEEM), where one in four Spanish postmenopausal women is obese, or the 2014 European Health Survey, which showed that Spanish menopausal women showed overweight (28,84 %) and obesity (15,94 %).

Diagnosis

To the criteria of Trifu et al.⁽¹²⁾ the diagnosis of hypothyroidism is simple in most cases, although for this an adequate establishment of the differential diagnosis with other metabolic and endocrine system disorders must be performed.

The diagnosis of hypothyroidism requires clinical evaluation and laboratory tests. The detection of thyroid hormones: TSH, Triiodothyronine (T3), Thyroxine (T4) and free Thyroxine (free T4). Hypothyroidism is closely related to the metabolic syndrome and in menopausal women, as in the general population, it is found in association with weight gain and energy reduction.^(13,14)

It is also important to know the risk factors and the clinical manifestations of the disease. According to Hernández Rodríguez,⁽¹⁵⁾ elevated serum thyrotropin is the best diagnostic test. According to Garnica Vargas et al,⁽¹⁶⁾ thyrostimulating hormone concentration is the most sensitive parameter to establish hypothyroidism and is indicative of thyroid dysfunction.

Treatment

According to Villalba et al,⁽⁹⁾ due to the causes and physiopathology of this condition, the treatment lies in the substitution of the insufficient glandular secretion with natural exogenous thyroid hormones or those synthesized by the pharmaceutical industry. Due to its high cost, glandular stimulation with TSH has not been implemented, besides, it creates resistance due to antibodies after some time of its application and determines hypersensitivity phenomena.

For the purposes of the present research, we agreed with the previous approach since, for the choice of the effective treatment, the clinical situation of the patient and the etiology of the condition should be taken into account.

CONCLUSIONS

Hypothyroidism in menopausal women occurs frequently and manifests a characteristic clinical manifestation due to its expression in the endocrine system. For its diagnosis it is essential to consider the detected levels of thyroid hormones, whose decrease constitutes the main cause of the disease.

Conflicts of Interest

The authors declare no conflicts of interest in relation to this research.

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Declaration of Authorship

RMM: conceptualization, research, methodology, project management, material resources, supervision, writing - original draft.

DMLH: data curation, formal analysis, research, material resources, writing - original draft.

HABM: research, validation, writing - review and editing.

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