Highlights of the new consensuses on thyroid diseases of the Brazilian Society of Endocrinology and Metabolism

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A consensus is a group process in which the entry of each member is carefully considered. It is a long process that synthetizes the wisdom of all participants in the best possible decision. The basis of the consensus is consent, which means giving permission. When one suggestion is agreed upon based on the evidence presented, the group is allowed to proceed with the recommendation. It is possible that not everybody agrees with the suggestion, but as the consensus was reached, the decision to move on should be followed because the best decision for the present moment was made. These new consensuses of the Thyroid Department of the Brazilian Society of Endocrinology and Metabolism (SBEM) were results of a long cooperation between our members, leading to an excellent job.

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THE BRAZILIAN CONSENSUS FOR THE DIAGNOSIS AND TREATMENT OF HYPERTHYROIDISM: RECOMMENDATIONS BY THE THYROID DEPARTMENT OF THE BRAZILIAN SOCIETY OF ENDOCRINOLOGY AND METABOLISM

Hyperthyroidism is a disease with different etiologies and a variable clinical picture depending on the age of the patient, concentration of thyroid hormones and time from the onset of the symptoms and beginning of the treatment. It is associated with increased mortality both in the acute (thyrotoxic storm) and subclinical forms.

The authors determined 53 recommendations on diagnosis, treatment, and monitoring of different forms of hyperthyroidism.

Some recommendations should be emphasized:

Decrease in the use of propylthiouracil (PTU): there is increased evidence on the hepatotoxic potential of PTU, mainly in kids. Nowadays, it is almost exclusively used in the first quarter of pregnancy.

Increased use methimazole: with the reduced use of PTU due to its potential side effects, and the increase in the use of antithyroid drugs shown in recent studies, methimazole has become increasingly important. Another important fact was the publishing of studies demonstrating its small possibility of teratogenicity and safe use during pregnancy, particularly after the first quarter.

Radioiodine and Graves ophthalmopathy: recognition that radioiodine may worsen Graves ophthalmopathy, especially in patients with risk factors (smoking, pre-existent ophthalmopathy, and high titers of TRAb).

Use of glucocorticoids to prevent Graves ophthalmopathy: indication of the use of glucorticoids in patients with Graves ophthalmopathy with risk factors, who will be submitted to radioiodine.

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Pregnancy and TRAb: indication for TRAb assay in pregnant women with Graves disease, including those who were already treated with radioiodine, in order to study fetal and neonatal hyperthyroidism.

In spite of all the efforts of the directors of the SBEM Thyroid Department, it is necessary to mention that most of the recommendations were not based on double-blind, randomized, prospective studies. Unfortunately, for some of the recommendations, this may not be possible due to the number of patients required, and the necessary length of the study.

Besides, there are questions that still remain unanswered:

- How long antithyroid drugs should be used in hyperthyroidism caused by Graves disease?
- Are there differences in relation to the quality of life in the different forms of treatment of Graves disease?

Ophthalmopathy in Graves disease still is a challenge for thyroid research, with countless unanswered questions. Among these, the best regimen for glucocorticoid use in the prophylaxis of Graves ophthalmopathy is still undefined in patients who were submitted to radioiodine treatment.

THE BRAZILIAN CONSENSUS FOR THE CLINICAL APPROACH AND TREATMENT OF SUBCLINICAL HYPOTHYROIDISM IN ADULTS: RECOMMENDATIONS OF THE THYROID DEPARTMENT OF THE BRAZILIAN SOCIETY OF ENDOCRINOLOGY AND METABOLISM

Currently, subclinical hypothyroidism (SCH) is the most common change in thyroid function, affecting all age ranges, both sexes, and associated, in some cases, to increased mortality and morbidity. The present consensus comes in an excellent moment, bringing objective responses in controversial issues, guiding not only endocrinologists, but a large part of the physicians in this country who face a very common clinical situation.

These are some of the key recommendations among the 29 determined by this group of renowned endocrinologists:

Repetition of TSH tests: SCH is a condition where TSH is above the upper limit of normality and free T4 is normal. In some situations, TSH is temporarily high, returning to normal levels after a certain period of time. Tests should be carried out at least 3 to 6 months apart to confirm diagnosis and treatment. There are well determined risk factors associated with SCH progression, such as TSH > 10mUI/L, presence of antibodies, and female gender.

SCH classification: SCH is associated with mortality and cardiovascular events. In order simplify the stratification of these patients, we may group them in mild to moderate (TSH between 4.5-9.9 mU/L), and severe SCH (TSH ≥ 10 mU/L).

Cardiovascular mortality and SCH: there is an association between patients younger than 65 years old and these conditions, indicating SCH treatment in these individuals.

Pregnancy and SCH: determination of values according to the pregnancy quarter, and treatment of SCH during pregnancy.

In spite of the extraordinary effort of this group of endocrinologists, some questions are still unanswered, unfortunately. We are expecting that the new Consensus on Thyroid Diseases during Pregnancy, that the Thyroid Department is already working on, may answer these questions. In relation to the screening of SCH during pregnancy, there may be a lack of scientific evidence to support universal screening, although it is fortunately done by most of the endocrinologists.

Another important aspect, which may be better understood in the near future, is how small fluctuations in thyroid function, as in SCH, interfere in the quality of life and heart function. Which is the best way to measure these findings?

CONGENITAL HYPOTHYROIDISM: RECOMMENDATIONS OF THE THYROID DEPARTMENT OF THE BRAZILIAN SOCIETY OF ENDOCRINOLOGY AND METABOLISM

The use of neonatal screening for congenital hypothyroidism (CH) led to the recognition and treatment of affected babies before the onset of clinical signs and symptoms of hypothyroidism. This widely spread method has, in part, reduced – if not eliminated – the adverse neurological effects of CH.

Some important points should be emphasized in this recommendation:

Mandatory screening of every baby and early introduction of L-thyroxin treatment: the main objective of neonatal screening for CH is to prevent sequelae, mainly intellectual disabilities secondary to

hypothyroidism. Screening should be carried out in all children and, when necessary, treatment should start in the first two weeks of life.

Differential diagnosis between permanent and transitory congenital hypothyroidism: neonatal hypothyroidism may be permanent or transitory. In the forms in which the etiology of hypothyroidism is not established, patients should be reevaluated after three years of age, with discontinuation of levothyroxin (L-T4).

Need to investigate other congenital abnormalities: CH is associated to cardiac, renal, and neurological abnormalities. Hearing screening should be performed out in CH carriers.

However, some issues related to the screening are still not understood. The best method for the screening is not defined: TSH? TSH and T4? Only T4?

USE OF THYROID FUNCTION TESTS IN CLINICAL PRACTICE

TSH assay: there are relevant observations, such as importance of the use of TSH in the initial evaluation of thyroid diseases and definition of normal values; questioning the possible advantages in treatment only patients with TSH ≥ 2.5 and < 4.5 mIU/L, but suggestion of follow-up and observation of the latter patients; careful evaluation and monitoring of patients with TSH between 4.5-10 mIU/L and normal T4L; use of TSH every five years in women over 35 years of age and in pregnant women, besides patients with increased risk for thyroid diseases; and pediatric indications (children with low stature and growth delay, hyperactivity, attention deficit, and inadequate school performance).

TRAb assay: another important point is the use of TRAb at the end of the treatment, as another tool to evaluate whether remission is possible or not.

As times go by and with the increase in information in different areas and in medicine, it is increasingly difficult to follow updates and studies in real time.

"Consensuses" are extremely useful tools for every professional, as they compile, organize, and classify in a practical way the different questions that have been posed in given situations. And more importantly, they answer these questions based on the best and most current scientific evidence. However, they should serve as guidelines, not as absolute and immutable truth. They should be used with common sense and based on the reality of each individual. With the ever growing progress in medicine and in the field of genetics, and with these tests becoming increasingly available to the population, medicine will become more personalized, with therapies uniquely adjusted to each individual.