

OUTCOME OF TREATMENT WITH THIONAMIDES AND ITS ADVERSE EFFECTS IN PATIENTS WITH GRAVES' DISEASE: RELATIONSHIP WITH DEMOGRAPHIC AND DISEASE'S FEATURES

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Abstract

Graves' disease is an autoimmune disease and is the main cause of hyperthyroidism. This study aims to characterize the evolution of treatment with antithyroid drugs in patients with Graves' disease in a tertiary care referral center. We observed that the use of propylthiouracil was a predictor factor of a greater chance of having some adverse effect in relation to the use of methimazole. Regarding the evolution of treatment, high concentrations of TRAb were the main determinant for non-remission of the disease with the use of thionamides.

Key words:

Graves' disease, hyperthyroidism, thionamides.

Introduction

Graves' disease is an autoimmune disease and is the main cause of hyperthyroidism, affecting mainly women in the age range of 40-60 years. The pathogenesis involves the presence of anti-TSH receptor antibodies (TRAb), which induce continuous and uncontrolled thyroid stimulation, which leads to excessive synthesis of thyroid hormones and to thyroid hypertrophy. The choice treatment is performed with antithyroid drugs, and radioiodine or thyroidectomy may be used in case of therapeutic failure. This study aims to characterize the evolution of treatment with antithyroid drugs as well as its adverse effects in patients with Graves' disease.

Results and Discussion

A review was conducted of the medical records of 251 patients diagnosed with Graves' disease, of both sexes, followed in Thyroid Dysfunction Clinic of the Endocrinology Division of HC-Unicamp, with subsequent descriptive data analysis, with position and dispersion measurements for continuous variables and frequency tables for categorical variables. There were analyzed variables such as sex, race, age, age at diagnosis, family history, smoking, alcoholism, ophthalmopathy, presence of antithyroid antibodies, morphological changes to ultrasonography, thyrotropin (TSH) and free thyroxine (FT4), thyroid scintigraphy, drug, dose and duration of treatment. Of the patients, 78.09% were women, 73.88% were white, mean age was 49.93 years and mean age at diagnosis was 38.90 years.

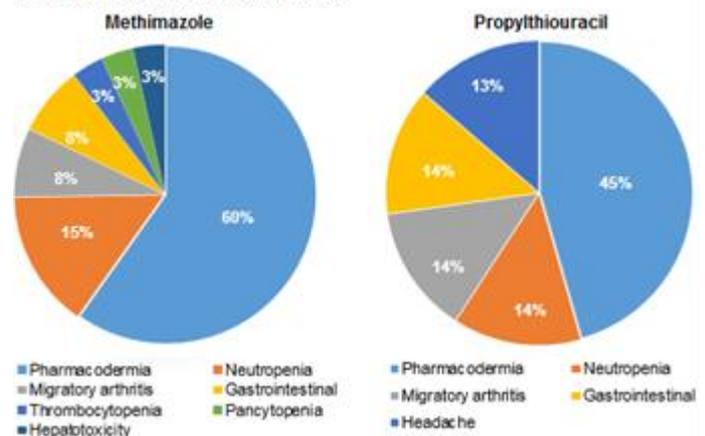
Regarding drug treatment, 92.8% were treated with methimazole and 6.8% with propylthiouracil. Methimazole doses ranged from 5 to 60mg daily, with a mean of 29.28mg; the propylthiouracil doses ranged from 100 to 800mg per day, with a mean of 364.70mg. The mean duration of treatment was 53.12 months.

During treatment, 11.16% of the patients had adverse effects, 61.5% of which were to methimazole, and 38.5% to propylthiouracil, represented in **Chart 1**. The thionamide type was the main determinant, among the analyzed variables, for the appearance of adverse effects ($p < 0.0001$). The use of propylthiouracil reflected a 19.286 times greater chance of having some adverse effect in relation to the use of methimazole.

The evolution after treatment with thionamides showed remission of the disease in 20.3% of the cases, considering that the study was performed in a tertiary

hospital, in which the majority of the cases are those of greater complexity, which do not had a good response to primary care treatment. Thus, 79.7% of the total sample showed no remission with thionamide, being referred to other types of treatment. Among the variables in relation to the evolution of treatment, TRAb ($p = 0.0002$) in high concentrations indicated a 5.211 times greater chance of non-remission of the disease with the use of thionamides.

Chart 1. Thionamides adverse effects



Conclusions

It is concluded that the type of thionamide used was the main determinant for the adverse effects; and that the use of propylthiouracil reflected in 19 times higher chance of presenting some side effects in the use of methimazole. Regarding the outcome of treatment, high TRAb was a predictor factor of treatment failure, leading to a 5 times higher chance of non-remission of the disease with the use of thionamides.

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