

## Autoimmune Mechanisms in Graves' Disease

Patty Lee\*

Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA

### DESCRIPTION

Graves' disease is an autoimmune disease that causes hyperthyroidism, or overactive thyroid. With this disease, your system attacks the thyroid and causes it to form more hormone than your body needs. The thyroid may be a small, butterfly-shaped gland within the front of your neck. The reason behind Graves' disease is unknown, but it mostly affects young or middle-aged women and sometimes runs in families. Smoking also can increase your risk of getting it.

### GRAVES' DISEASE

Occasionally, the thyroid stimulating antibodies do get away in patients treated with antithyroid drugs, leading to remission of the Graves' disease and allowing discontinuation of the medications. However, the thyroid stimulating antibodies may return causing the Graves' disease to relapse. Because the thyroid needs iodine to release hormones, the thyroid takes the radioiodine into the thyroid cells and therefore the radiation destroys the overactive thyroid cells over time. This causes your thyroid to shrink, and symptoms lessen gradually, usually over several weeks to many months.

Your risk of developing Graves' disease is high within the year after parturition. This suggests that pregnancy might trigger or reveal Graves' disease in some women. Have a history of infection with the virus that causes mononucleosis [1]. Thioamides, such as methimazole and propylthiouracil, and I131 iodine ablation are the most commonly prescribed treatment for Graves' disease. Total thyroidectomy is typically overlooked for treatment and is usually only offered if the opposite options have failed. Avoid the following foods- Iodized salt, any vitamins or supplements that contain iodine (especially kelp and dulce), Milk or other dairy products including ice cream, cheese, yogurt and butter, Seafood including fish, sushi, shellfish, kelp or seaweed, Herbal supplements.

Quality of life is worse at 6-10 years after radioactive iodine therapy of Graves' disease compared with treatment with antithyroid drugs or surgery. Quality of life is worse at 6-10 years

after radioactive iodine therapy of Graves' disease compared with treatment with antithyroid drugs or surgery. In some rare cases, the immune reaction to Graves' disease – the foremost common sort of hyperthyroidism – can continue long enough to attack the thyroid and cause inflammation. Therefore, it can cause Hashimoto disease, which may successively cause weight gain [2].

Graves' disease causes your thyroid to form an excessive amount of hormone. Medications, radioactive iodine, or surgery are treatment options of hyperthyroidism. If left untreated, hyperthyroidism can cause bone loss or an irregular heartbeat. Both Hashimoto's thyroiditis and Graves' disease can run in families. Graves' disease is related to pernicious anaemia, vitiligo, DM type 1, autoimmune adrenal insufficiency, systemic sclerosis, myasthenia, Sjögren syndrome, atrophic arthritis, and systemic LE [3].

If left untreated, hyperthyroidism can cause serious problems with the guts, bones, muscles, cycle, and fertility. During pregnancy, untreated hyperthyroidism can cause health problems for the mother and baby. Graves' disease can also affect your eyes and skin. To confirm a diagnosis of Graves' disease, your doctor may do a radioactive iodine uptake test, which shows whether large quantities of iodine are collecting within the thyroid. The gland needs iodine to make thyroid hormones, so if it's absorbing unusually large amounts of iodine, it's obviously making too much hormone.

### REFERENCES

1. Xiong TY, Redwood S, Prendergast B, Chen M. Coronaviruses and the cardiovascular system: acute and long term implications. *European Heart Journal* 2020;41:1798-1800.
2. Kochi AN, Tagliari AP, Forleo GB, Fassini GM, Tondo C. Cardiac and arrhythmic complications in patients with COVID-19. *J Cardiovasc Electrophysiol* 2020;31:1003-1008.
3. Vink AS, Neumann B, Lieve KV, Sinner MF, Hofman N, El Kadi S, et al. Determination and interpretation of the QT interval: Comprehensive analysis of a large cohort of long QT syndrome patients and controls. *Circulation*. 2018;138(21):2345-2358.

**Corresponding author:** Patty Lee, Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA. Email: leepatty@ucsd.edu

**Received date:** January 4, 2021; **Accepted date:** January 18, 2021; **Published date:** January 25, 2021

**Citation:** Lee P (2021) Autoimmune Mechanisms in Graves' Disease. *J Vaccines Vaccin*. S11:e003.

**Copyright:** © 2021 Lee P. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.