Evaluation Of New Biomarkers As A Predictor For Thrombosis In Patients with Thyroid Dysfunction

Thesis
Submitted for partial fulfillment of MD degree in internal medicine

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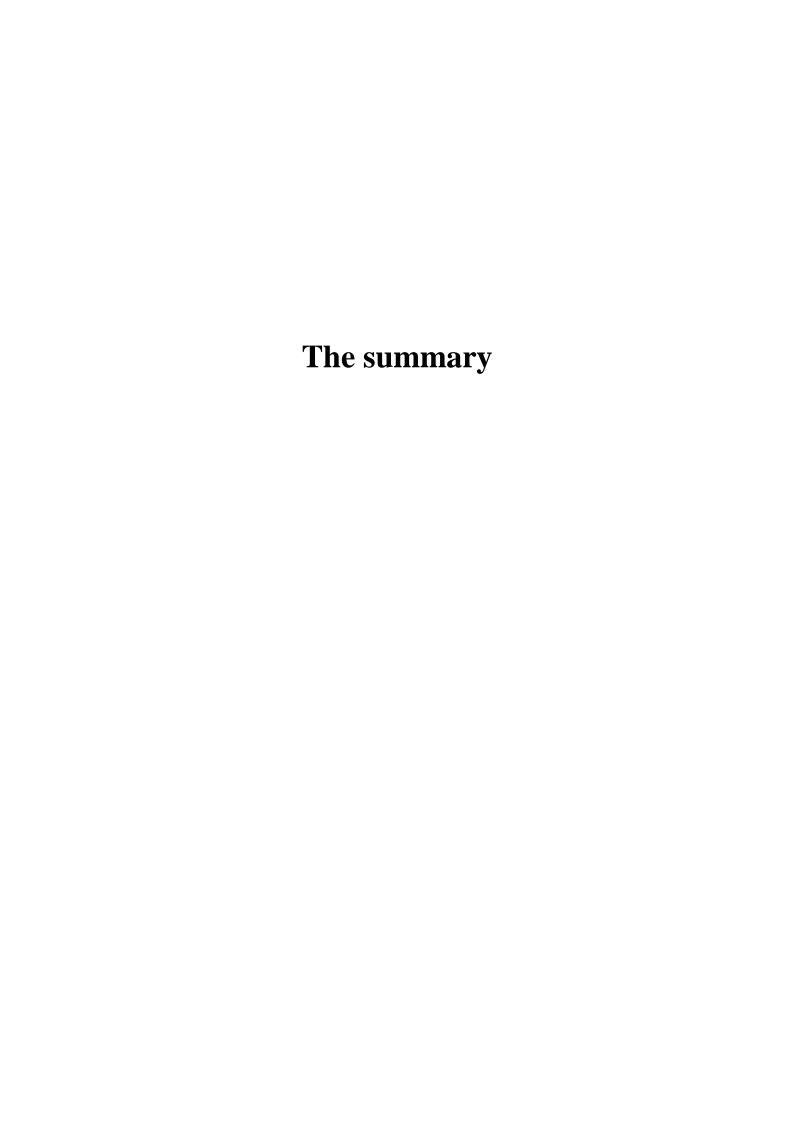
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The summary

The thyroid, the largest endocrine gland in the body, weighs about 20 g, the right lobe usually being larger than the left. Adult size is reached at age 15. **(Pankow et al., 1985).**

Normal thyroid hormone formation requires normal levels of TSH and an adequate but not excessive supply of iodine. Optimal iodine intake is 150 to 300 mugs/day. In some mountainous areas of the world, daily iodine supplies can be as low as 20 to 30 mugs. **(Zimmermann et al., 2008).**

Most thyroid hormone effects are mediated by the binding of T3 to nuclear thyroid hormone receptor proteins. T3 has a 10fold higher affinity for this nuclear receptor than T4, accounting for the higher biologic activity of T3.affect every single cell in the body through modulations of Oxygen consumption, Growth rate, Maturation and cell differentiation, Turnover of Vitamins, Hormones, Proteins, Fat, CHO. **(Brent, 2012).**

Blood is a liquid that circulates under pressure through the vasculature. Hemostasis is the mechanism that leads to cessation of bleeding from a blood vessel. The endothelium in blood vessels maintains an anticoagulant surface that serves to maintain blood in its fluid state. **(Gale, 2011).**

Hemostasis enables an organism to *1*) close off damaged blood vessels, *2*) keep the blood in a fluid state, and *3*) remove blood clots after restoration of vascular integrity. There are two main components of hemostasis. Primary hemostasis is the result of complex interactions between the vascular wall, platelets and adhesive proteins, refers to platelet aggregation and platelet plug formation. **(Varga-Szabo et al., 2008).**

The clinical relationship between thyroid disorders and the hemostatic system was first defined in the beginning of the last century. Various acquired abnormalities of the coagulation-fibrinolytic system have been reported in patients with thyroid dysfunction. These abnormalities may range from subclinical laboratory abnormalities to clinically important hemostasis disorders. **(Gao, 2016).**

The aim of our study is Evaluation of new biomarkers as a predictor for thrombosis in patients with thyroid dysfunction.

Our study is a **case-control** study which enrolled:

1. Group A: twenty patients with increased thyroid functions (hyperthyroidism group).

2. Group B: twenty patients with decreased thyroid functions (hypothyroidism group).

3. Group C: twenty subjects with normal thyroid functions (control group).

Our study showed that there was no significant difference between study groups As regards CBC components, PT-INR, PTT and D-dimer level.

Also showed that p-selectin level among hyperthyroidism more than hypothyroidism group. Also, there was significance predictor to PTT and PLT count level in relation to p-selectin level.

We can conclude that there was no significant difference between study groups As regards CBC components, PT-INR, PTT and D-dimer level. Also p-selectin level among hyperthyroidism more than hypothyroidism group.