

Dedication

To my parents

To my wife

To my family

And to my colleagues

Isam

Acknowledgements

Allah says: "Who just thank, thanks for himself." (Verse 40 Alnaml). Prophet says: "Who does not thank people he does not thank Allah". It is beautiful thanks and gratitude that is credited to my family, so I can extend my deepest thanks and gratitude to my supervisor Dr Ghada Abdurrahman Elfadil and Dr Abdelgadir Ali Elmugadam whom are kindly guided me to accomplish this research. Thanks to Dr Isam Farah, Dr Omer Abdu Liemon, Dr Abd allah Ibrahim Eltiraifi whom are senior consultants of medicine for their support the research by clinical examination for the study groups and releasing out of the cases. Thanks for Omdurman teaching hospital central laboratory. Asia medical center laboratory, and albogaa special medical center laboratory for their support by collection of the specimens ,specimens storage ,and their analysis .Thanks to patients and volunteers for their support by their specimens and special in formations Finally thanks to all who helped me to accomplish this research

Abstract

High titers of antibodies to anti thyrotropin receptor(TRA-Ab), and Thyroperoxidase antibodies(TPO-Ab) are the hallmarks of human autoimmune thyroid diseases. The aim of this study was to assess the antibodies in Sudanese hyperthyroidism (mean age 33.22 ± 10.04 , range 19-59 years) with hyperthyroidism and graves' disease. One hundred Sudanese patients with hyperthyroidism(50with hyperthyroidism and clinically diagnosed with graves' disease, 50 with hyperthyroidism and clinically diagnosed without graves' disease), and fifty apparently healthy as control group , age and sex were matched. Study done in Endocrinology Outpatient Clinic at Omdurman Teaching Hospital, Khartoum state, Sudan, during the period June 2011 to June 2013.

Thyroid function test (FT3, FT4, and TSH) was determined by using fully automated chemical analyzer (ROCH ELECSYS) with COBAS kits, and anti Thyroperoxidase antibodies, and anti thyrotropin receptor antibodies were determined by ELISA technique with Euro immune Kits. Analysis of the data was performed using the SPSS , $P < 0.05$ considered significant.

Study showed that there were significantly high serum FT3, anti TRA, TPO antibodies among the Sudanese patients with Graves disease compared with patients with hyperthyroidism. 90% of patients with graves' disease had positive TRA antibodies, and 16% had positive TPO antibodies.

In conclusion, the parameters, FT3, anti-TRA- Ab, and anti-TPO-Ab can be used as a biochemical panel for differential diagnosis of Graves' disease from hyperthyroidism.

المستخلص

تتميز امراض الغدة الدرقية المناعية الذاتية بمعدلات عالية من الاجسام المضادة لمستقبلات الثيروتروبين 0

Thyroperoxidase وإنزيم الثيروبيروكسيديز وTRABs (TPO-AB) T الهدف من هذه الدراسة هو قياس الاجسام المناعية المضادة للعدة الدرقية لدى المرضى السودانيين الذين يعانون من فرط نشاط الغدة الدرقية غير المناعي وكذلك المرضى الذين يعانون من فرط نشاط الغدة الدرقية المزمن (داء قريفز) (متوسط الاعمار 22 و 10 ± 32 ومدي مقداره 15 الي 59 سنة

الذين شاركوا في هذه الدراسة عدد 50 من المرضى الذين يعانون من داء قريفز وتم تشخيص حالاتهم بواسطة استشاري الطب الباطني وغير خاضعين لعلاج وعدد 50 مريض يعانون من فرط نشاط الغدة الدرقية غير المزمن وتم تشخيص حالاتهم بواسطة استشاري الطب الباطني وعدد متطوع صحيح علي ما يبدو 0 تمت مطابقة النوع، العمر لدي عينات الدراسة

الدراسة أجريت في عيادة الغدد الصماء العيادات الخارجية في مستشفى أم درمان التعليمي الخرطوم اختبار وظيفة الغدة الدرقية (FT3، FT4، TSH) تم تحديد باستخدام محلل كيميائي الي بالكامل (ELECSYS ROCH) مع مجموعات كوباس وتم تحديد الأجسام المضادة الثيروتروبين والثيروبيروكسيديز بواسطة تقنية ELISA مع أطقم المناعة اليورو. تم إجراء تحليل البيانات باستخدام اختبار مربع كاي مع $P > 0.05$ تعتبر كبيرة. وأظهرت الدراسة أن هناك ارتفاع كبير في مستوى FT3 والأجسام المضادة TPO بين المرضى السودانيين المصابين بمرض جريفز مقارنة مع المرضى الذين يعانون من فرط نشاط الدرق. وكان 90% من المرضى الذين يعانون من مرض جريفز الأجسام المضادة TRA إيجابيه وكان 16% TPO الأجسام المضادة إيجابية.

وفي الختام، يمكن أن تستخدم TPO-AB، TRA-AB، FT3 في تشخيص داء قريفز

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Abbreviations

FT3	Free triiodothyronine
FT4	Free tetraiodothyronine
GD	Graves disease
TPOAbs	Thyroid peroxidase anti bodies
TRAbs	Thyroid receptor anti bodies
TSH	Thyroid stimulating hormone
DIT	Di iodo tyrosine
MIT	Mono iodo tyrosine
TMB	Tetra methyl Benzedine
ELISA	Enzyme linked immunosorpent assay
rpm	Round per minute
nm	nanometer
mIU/L	Mili international unit per liter
Pg/ml	Pico gram per milliliter
ng/dl	Nano gram per deciliter
Pmol/ml	Pico mol per milliliter
μL	Micro liter
U/L	Unit per liter
SD	Standard deviation