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Effect of Aqueous Extract of *Vitis Vinifera* Leaf on Some Immnoglobulin in Levothyroxine Sodium Induced Hyper Throidism Rabbit Females

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Abstract
The Aqueous Extract of *Vitis vinifera* leaves was investigated for its effect on some immunoglobulin in induced hyperthroidism rabbits . The equeous extract of leaves at does level of 100 mg ml showed significant increase (p<0,05) on level of IgG and significant decrease (p < 0.05) on level of IgA , IgM to normal level .
Keywords : vitis vinifera , L- thyroxin , IgG , IgA, Igm .

INTRODUCTION

Vitis vinifera L.(grape) is native to the Mediterranean region , central Europe and south western Asia and cultivated widespread in Europe , Asia and America . The plant is alina with flaky bark and the leaves are alternate palmately and board . The fruit isaberry and can be green red or purple [1]. Grape leaves with antioxidant activity [2] have been reported to treat chronic venous insufficiency in human [3] and nephrotxicosis induced by citrinin [4] .
It has also been demonstated that the grape leaf hydro-alcohlic extract induces spasmolytic effect on rat uterus precontracted by oxytocin [5].
Effect of specific medicinal herbs on Immune system and Immune cells :
Systemic studies on the effect of specific medicinal harbs on immune system are designed to obtain evidence – based scientific knowledge on the appropriate use of traditional medicinal herbs . The development of immunology has resulted in further complexity by combining external (environment and pathogens) and internal (neroendocrine – immune system) factors in the pathogenesis of infectious diseases .
The most important thing is to learn how to modulte the immunerespone to external conditions with powerful new techniques and drugs [6-8] .
Traditional herbal medicine provides several remdies for strengthening the body s resistance toillness through effects on immune system components . such as dedritic cells , T cell . macrophages , etc [9].
Inflammation is the body's protetive reaction to controlling infections and promoting tissue repair however , uncontrolled and excessive inflamation results in tissue damge and diseases including rheumatoid arthritis , inflammatory bowel diseases psoriasis , cancer etc .
Recently many laboratories have focued on the indentificantion of immunomodulatory phytocompounds from herbal medicine that are reported to modulate immunity .
Several biochemical, cellular immunological , and molecular biological techniques and mouse model have been used to investigate the immunomodulatory function of phtocompound in regul immunity and in modulating human cells including T cells , macrophages and dendritic cell functions .
Several plant compounds are know to be able to bind T cell components and to regulate T cell function . the indentification of genes involved in T cell function is also very important . In T cell differentiation several genes play very important . These genes products can be important for screening the phytocompounds to which the gene products can bind . Also an understanding of important signaling molecules in T cells helps us to screen their intraction partners from plants [10-14].
The aim of the present study was to investigate the effect of vitis vinifera leaves extract on some immunoglobulin in hyperthyroidism rabbits .

MATERIAL AND METHODS

The fresh and healthy leaves of grape (vitis vinifera) were collected in April 2012 from Iraqi farms in Baghdad . the leaves were dried and powdered . The powered mixed with distilled water (25g:250mL) and were incubated for 3 hrs at (60)C^0 htan inculbated overnight at room temperature .
Suspension was than filtered . water extracts were prepared daily just before administration orally to the experimental in does of (5 mL/Rabbit of 1.5 – 2.5 kg)
Preparion of thyroxin : fresh solution of levothyroxine sodium was prepared (tablet dissolve in water) just before feeding . for the animal given the thyroxin (50µg/kg body weight).Levothyroxine sodium was purchased from Al-Sophee Pharma, Al-Adamia, Baghdad, Iraq.experimental

animal = Twenty famel ORYCIOLAGUS CUNTCULUS (1.5 – 2.5 kg each) were kindly supplied by city of medicine(in Baghdad) for the period from September 2012 to May 2013 . And were used in this research rabbits were maintaind with free access to water and diet (contaninging multivitamins protein , vegetable , bread) Experimental animals were divided in to tow groups (10 rabbits each)

1. control group : rabbits were orally administered (using afeeding solution) with adaily does of 5 ml distilled water for 2 month .
2. plant- treated levothyroxine soduium group : 50µg of L-thyroxin was orally administered daily to each rabbit for one month, then 5mL of the of the plant extract (100 mg/mL) was orally administered daily to each rabbit in this group for two month .

Blood sampling : Blood sample were collected from the heart of rabbit using haparinzed capillary tubes . serum was sparated from blood sample , then fronzen until used .

The levels of immunoglobulin (IgG, IgA, IgM) in serum were measured by ELSA (Human Germany) using specil kits for each gluobulin provided from Mono bind Inc [15-16] .

Preliminary phgtochemical screening : the tests were done to check the presence of the active chemical constituents such us alkaloids, phenolic content , carbohydrate , reducing sugar , amino acid , protein and tanine by the following procedure :

1. Test for alkaloids [17] .
2. Test for phenolic content [18].
3. Test for carbohydrates [19].
4. Test for reducing sugar [20].
5. Test for tanine [21].
6. Test for amino acid and protein [22].

Statistical analysis ; All statical analysis of the study were done using SPSS version 15.0 for windows (Statistical package for social science , Inc , Chicago , IL, USA)

Descriplive analysis used to show the mean ± standard deviation of variable . the significance of difference between mean values was estimated by student T- test . the probability $p< 0.05$ = significant .

RESULTS AND DISCUSSION

The daily orally treatment with in does 50 µg /kg resulted in the development of l- thyroxin after tow weeks of administration , the effect gradually increasing over for one month period to reach airs of about once and half times over intal values compared with healthy rabbits .

The aqueous extract of vitis vinifera leaves was administrated orally 100mg /ml to each hyperthyroid rabbit to assess the affect of the plant extract .

Table (1) showed results of phytochemical screening of aqueous of vitis viniferal leaves .

Table(1): Result of phytochemical screening of aqueous extract of plant.

Pytochemical class	Aqueous extract
Alkaloids	+
Phenolic content	+
Carbohydrates	+
Reducing sugar	+
Amino acide + Proteins	+
Tannins	+

Table(2) shows the immunoglobulin level in the tow studied group

Table(2): Illustrate values of IgG, IgA, IgM level in blood rabbit females.

	Control C	L.Thyroxine C*	L.Thyroxine +leav extract G1 month	L.Thyroxine +leav extract G2 2 month	p-value			
	Mean± S.D	Mean± S.D	Mean± S.D	Mean± S.D	C_1 vs. C*	G_{1v} s.C*	G_2vs.C*	G_2 vs.C
IgG mg/dl	2100± 50	647 ± 4	2465± 10	2566 ± 10	0.05	0.05	0.05	0.05
IgM mg/dl	21.2 ±0.05	22.5± 0.5	21.0± 0.3	21.5 ± 0.3	0.05	0.05	0.05	0.05
IgA mg/dl	43.3±0.03	44.3±0. 2	43.0± 0.3	43.5±0.2	0.05	0.05	0.05	0.05

C= control , c* = administrate with L- thyroxin

There was significant decrease in the level of IgG in hyperthyroid rabbits serum when compared with the control group the result agreed with [23] but disagree with [24] , while the level of IgM and IgA in rabbitd serum increase when it compard with control group this results agreed with [24] .

The intake of vitis vinifera leaves extract (100Mg/ mL)for tow month caused significant increase in IgG while reduction IgM and IgA levels to control . NO available literature could be traced concerning the effect of vitis vinifera leaves extract in rabbits on immunogloblulin (IgG, IgA, IgM)

CONCLUSION

It is inferred from the present study that vitis vinifera leaves extract elicited mild and moderate at terations on IgM , IgA and had astimulating effect on IgG.

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