

Dedication

To my mother and father

To my sister and brother ...

To my best friends ...

To My Colleagues ...

To my supervisor...

I Dedicate my research...

Wagdi I smail Mohammed

Acknowledgments

First of all thanks to my God, who gave me the ability for supplementing this research, also all thanks and respect to my family supported, helped and advised me in all levels of education. With all the love respect, appreciation and thanks to Dr. Ghada Abdalrahman ELfadil Department of clinical chemistry, Sudan university of science and Technology for her kindness, good guidance, valuable direction and generous advice that has kept me on the right track. Iam indebted to her kind cooperation.

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Abstract

This study aimed to assess the blood plasma levels of total cholesterol, triglyceride, high density lipoprotein cholesterol and low density lipoprotein cholesterol for Sudanese women who are using oral contraceptive pills.

This study included 50 apparently healthy women using oral contraceptives and 30 apparently women not using this pills , in period from March to July 2012, by using spectrophotometer.

The results of this study showed the mean of plasma levels of total cholesterol, triglyceride and low density lipoprotein cholesterol of test group were significantly increased when compared to control group ($p = 0.000$, $p = 0.000$, $p = 0.013$), while the observed decrease in the levels of high-density lipoprotein cholesterol in test group when compared to control group ($p = 0.000$)).

Also the study showed a positive correlation with a statistical significance between the levels of total cholesterol , triglyceride and low density lipoprotein cholesterol ($R = 0.826$, $p = 0.000$), ($R = 0.893$, $p = 0.000$), ($R = 0.814$, $p = 0.000$), and significant negative correlation in the levels of high-density lipoprotein cholesterol ($R = -0.520$, $p = 0.000$) with duration of using oral contraceptives.

This study concluded that there are significant increase in the levels of total cholesterol, triglyceride, and low density lipoprotein cholesterol while there was a decrease in the level of high-density lipoprotein cholesterol in women who are using oral contraceptive pills.

المستخلص

هدفت هذه الدراسة لتقويم مستويات بلازما الدم للكولسترول الكلي، ثلاثي الجليسرأيد، كولسترول البروتينات الدهنية عالية الكثافة وكولسترول البروتينات الدهنية منخفضة الكثافة للسودانيات اللاتي يستخدمن أقراص منع الحمل. ضمت هذه الدراسة 50 امرأة يتناولن أقراص منع الحمل و 30 امرأة صحيحة لا يتناولن هذه الأقراص في الفترة من مارس حتى يوليو 2012. وللقياس تم استخدام جهاز الطيف الضوئي

أشارت نتائج هذه الدراسة إلي وجود زيادة ذات دلالة إحصائية في متوسطات مستويات بلازما الكولسترول الكلي وثلاثي الجليسرأيد وكولسترول البروتينات الدهنية منخفضة الكثافة بالنسبة لمجموعة الاختبار مقارنة بالمجموعة الضابطة حيث كان الاحتمال الإحصائي ، (p=0.013 , p=0.000, p=0.000) ، بينما لوحظ نقصان في مستويات كولسترول البروتينات الدهنية عالية الكثافة ومجموعة الضابطة (p=0.000) خلال تحليل المقارنة.

وأيضاً أظهرت الدراسة وجود ارتباط موجب ذو دلالة إحصائية بين مستويات الكولسترول الكلي و ثلاثي الجليسرأيد ومستوي كولسترول البروتينات الدهنية منخفضة الكثافة (R=0.826, p=0.000) ، (R=0.893, p=0.000) ، وارتباط معنوي سالب في مستويات كولسترول البروتينات الدهنية عالية الكثافة (R= -0.520, p=0.000) مع مدة تعاطي أقراص منع الحمل.

خلصت هذه الدراسة أن هناك ارتفاع في مستويات الكولسترول الكلي، وثلاثي الجليسرأيد، وكولسترول البروتينات الدهنية منخفضة الكثافة ، بينما كان هناك انخفاض في مستوى كولسترول البروتينات الدهنية عالية الكثافة عند النساء اللواتي يستخدمن أقراص منع الحمل.

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List of abbreviation

Abbreviation	Full text
ATP	Adenosine Triphosphate
BMI	Body Mass Index
CAT	Catalase
COC	Combined Oral Contraceptive
DW	Distilled Water
FSH	Follicle Stimulating Hormone
GPO	Glycerol-3-peroxidase
GPX	Glutathione peroxidase
GSH	Reduced glutathione
GST	Glutathione S- Transferase
HCP	Hormonal Contraceptive Pill
HDL	High Density Lipoprotein
IUC	Intrauterine Contraceptive
IUD	Intrauterine Devices
IUS	Intrauterine System
LCAT	Lecithin Cholesterol Acyltransferase
LDL	Low Density Lipoprotein
LH	Luteinizing Hormone
LP	Lipoprotein
LPL	Lipoprotein Lipase
LPO	Lipid peroxidation
OC	Oral Contraceptive
POP	Progesterone Only Pills
SD	Standard Deviation
SPSS	Statistical Package for Social Science

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