

:( )

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:

:

LDL

(P < / )

(P < / )

:

:

\*

mdarabiamin@hotmail.com

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// :

...

[ ]

/

-

[ ]

(% / )

[ ]

[ ]

[ ]

:

%

[ ]

MERK

Rotexmedica mg/cc

( )

/ mg/cc

%

MERCK

( )

[ ]

[ ]

HDL LDL

HDL LDL

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<sup>1</sup> Fatty streaks

( )

[ ]

HDL-

(TG)

LDL-C C

LDL-C HDL-C

mg/kg

[ ]

[ ]

[ ]

HDL-C

LDL-C

mg

mg

°C

mg

mg

°C

ml

ml

ml

( mg/kg)

[ ]

(IP)

mg

KCL

[ ]

mg/kg

[ ]

[ ]

)

[ ]

[ ] (

SPSS

% /

ANOVA

General Linear Model(repeated measures)

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.(P< / )

.( )

P < /

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/ ± / < **	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± / **	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± / **	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± / **	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /

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ANOVA

\*

mean±SD ± †

P< / \*\*

\*

( )

/ ± / \*\*

/ ± / \*\*

(ANOVA

)

\*

P< /

\*\*

n=

mean±SD

±

†

LDL-C HDL-C

LDL-C

( )

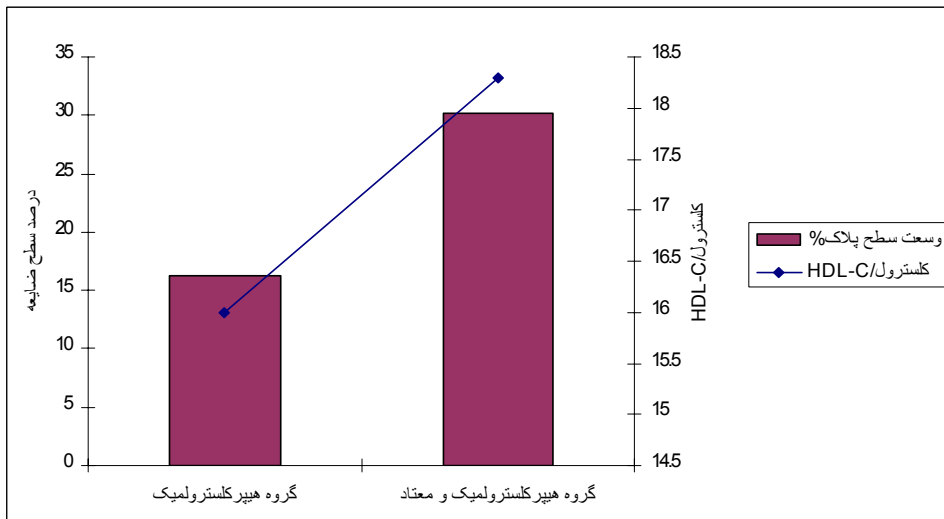
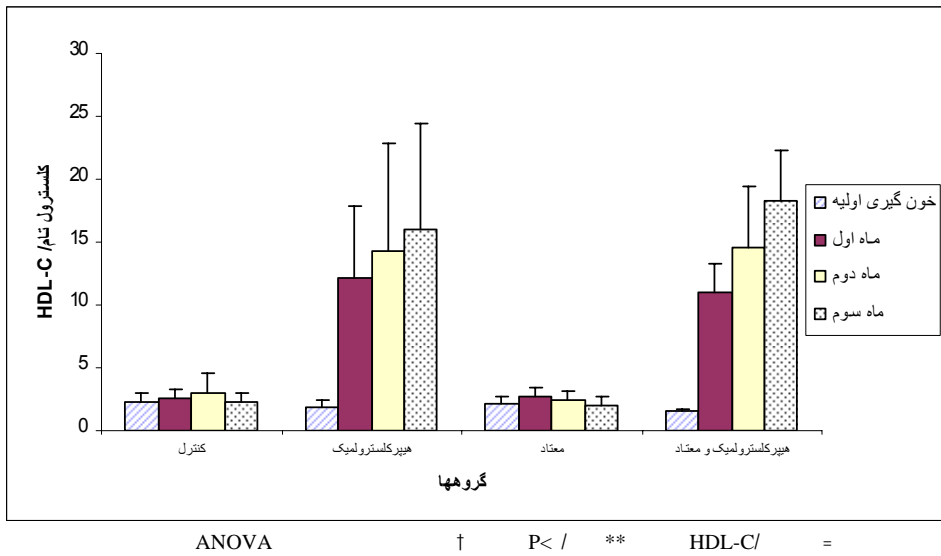
/ )

( ) . (P<

LDL-C HDL-C

(P< / )

( )





( )



( )

Frassdorf

[ ]

Kappa B

Weihrauch

( )

[ ]

( )

[ ]

Brayant

[ ]

(P< / )

(Total Cholesterol/HDL-C)

( P</ )

( )

( )

1. Virmani Renu, Bruke Allen, Farb Andrew, et al. *Cardiovascular Pathology*. 2<sup>nd</sup> edition, Vol.40, Chap.1, pp: 26-50, Washington DC: Saunders 2001.
2. Kullo J. Iftikhar, Gau T. Gerald, and Tajik Jamil. Novel risk factors for atherosclerosis. *Mayo Clin Pro* 2000; 75:369-80.
3. Verhamme P, Quarck R, hao H. Dietary cholesterol withdrawal reduces vascular inflammation and induces coronary plaque stabilization in miniature pigs. *Cardiovascular Research* 2002;56:135-44.
4. Frassdorf J, Weber NC, Obal D, Toma o, Mullenheim J, Kojda G, preckle B, Schalack W . Morphine induces late cardioprotection in rat hearts in vivo: the involvement of opioid receptors and nuclear transcription factor kappa B. *Anesth Analg* 2005;101: 934-41.
5. Nunez BD Miao L, Klein MA, Nunez MM, Travers KE, Ross JN, Carozza JP Jr, Morgan JP. Acute and chronic cocaine exposure can produce myocardial ischemia and infarction in Yucatan swine. *J Cardio Vasc Pharmacol* 1997;92: 145- 55.
6. Weihrauch D, Krolikowski JG, Bienegraeber M, kersten JR, Warltare DC, Pagel PS. Morphine enhances isoflurane-induced postconditioning against myocardial infarction: the role of phosphatidylinositol-3-kinase and opioid receptors in rabbits. *Anesth Analg* 2005;101: 942-9.
7. Mokri A, Brief overview of the status of drug abuse in Iran. Available from [www.ams.ac.ir/AIM/0253184.htm](http://www.ams.ac.ir/AIM/0253184.htm)
9. Yanni AE. the laboratory rabbit: an animal model of atherosclerosis research. *Lab Anim* 2004;38 : 246 -56.

10. Laprna D, pierdomenico SD, Ciofant G, , Giamberardino MA and Cuccurullo F. Aortic glutathione metabolic status: time - dependent alterations in fat fed rabbits. *Atherosclerosis* 2004;173: 19 – 25.
11. Badayy AA, Evans CM, Evans M. Production of tolerance and physical dependence in the rat by simple administration of morphine in drinking water. *Br J Pharmacol* 1982; 75: 485- 491.
13. Puch L J, Self DW, Nestler EJ, Taylor JR . Opposite modulation of opiate withdrawal behavior on microinfusion of a protein kinase -A inhibitor versus activator into the locus coeruleus or periaqueductal gray. *The J of Neuroscience* 1997; 21: 8520-8527.
14. Kita T, Nagano Y, Yokode M, Ishii K, Kume N, Ooshima A, Yoshida H, and Kawai C . Probucol prevents the progression of atherosclerosis in Watanabe Heritable Hyperlipidemic Rabbit, an animal model for familial hypercholesterolemia. *Proc Natl Acad Sci. USA* 1987; 84: 5928-5931.
15. Flecknell PA. Editor. Laboratory animal anesthesia Academic Press Limited, Lonodon,. 2<sup>nd</sup> edition, 1989: 98- 100, 128 – 129.
16. Harrison FA,the UFAW. *Hand book of the care and management of laboratory animal*. chap 16,15<sup>th</sup> edition,1997.
17. Kolodgie FD, Virman R, Cornhillg JF,Herderick EE, Gray TH, Malcom GT and Wolfgang WJ. Mergner WG et al. Cocaine: an independent risk factor for aortic sudanophilia. A preliminary report. *Atherosclerosis* 1992; 97: 53 -62
18. Kolodgie FD, Wilson PS, Cornlill JF, Herderick EE, Mergner WG ,virmani R. Increased prevalence of aortic fatty streaks in cholesterol – fed rabbits administered intravenous cocaine: the role of vascular endothelium. *Toxicol pathol* 1993; 21: 425- 35.
19. Bryant Hu, Kuta CC, Story JA, Yim GK. Stress and morphine induced elevation of plasma and tissue cholesterol in mice; reversal by naltrexone. *Biochem Pharmacol* 1988;37: 3777- 80.