Reviewer’s report

Title: Lutein Dietary Supplementation Attenuates Streptozotocin-induced testicular damage and oxidative stress in diabetic rats

Version: 2 Date: 7 April 2015

Reviewer: Mona Yehia

Reviewer’s report:

1. Minor Essential Revisions—
   • Errors in interpretation:
     *Added this paragraph at the end of result.

Data were expressed as Mean± SEM. and analyzed using one-way ANOVA followed by Student Newman-Keuls multiple comparisons test (n=6). Difference between groups was considered statistically significant when (*) P # 0.05, (**) P # 0.01 and (***) P # 0.001. (a) D group was compared with ND group; (b) lutein treated groups were compared with D group*

Figure legends:

Figure 1 Effect of lutein on serum level of testosterone in diabetic rats. Note the lutein dose dependent for monitoring the level of testosterone up to ND group. Data were expressed as Mean± SEM. and analyzed using one-way ANOVA followed by Student-Newman-Keuls multiple comparisons test (n=6). Difference between groups was considered statistically significant when (*) P # 0.05, (**) P # 0.01 and (***) P # 0.001. (a) D group was compared with ND group; (b) lutein treated groups were compared with D group.

Figure 2: Effect of lutein on testicular levels of (A) IL-1# and (B) TNF-# of diabetic rats. Note the down regulation of both cytokines on the lutein dose- dependent groups was compared to D group.

Figure 3: Effect of lutein on testicular levels of (A) TBARS, (B) T-GSH and (C) NPSH of diabetic rats. Note a significant decreased of TBARS in group treated lutein (160mg ) comparing to diabetic one, while highly significant increased was noticed in the T-GSH and NPSH.

Figure 4: Effect of lutein on testicular activities of (A) SOD and (B) CAT of diabetic rats. Note the up regulating of both enzymes on the lutein dose-dependent groups comparing to D group.

Figure 5: Effect of lutein on testicular levels of (A) DNA, (B) RNA and (C) TP of diabetic rats. Note the lutein dose-dependent of monitoring the expression of DNA, RNA and TP were increased up to ND group.
Discussion

At line 1- (278) (complete the line with)
the present results revealed markedly elevation in the levels of TNF-# and IL-1# in the diabetic group of animals.

2- 282-284)
This paragraph should be neglect (In the present study, also found an elevation in the levels of pro-inflammatory and oxidative stress biomarkers. Such as TNF-# and IL-1# were markedly elevated in the diabetic group of animals).

3- 284
Added (new paragraph)
In the present study, both………

4- 306- 308
this sentence should be neglect(lutein demonstrated a strong protection against diabetic-induced sexual dysfunction and testicular oxidative injury. It also)

Added (new one)
Lutein treated groups revealed inhibition in diabetic-induced reduction of serum levels of testosterone. They confirmed by the histopath…………..(309)

5- 312-313
this sentence should be neglect(Other biochemical findings of the present study suggest that these protective effects are due to ability of lutein to modulate lipid peroxidation and ROS production)

6- 329
Added (new paragraph)
This finding revealed the ability of lutein for modulating lipid peroxidation and ROS production, it may be suggested through the protective effect of lutein.

7- 340- 341
this sentence repeated before

(Moreover, it was reported that lutein suppresses the activation of NF-#B, one of the downstream effectors of inflammatory cytokine signaling in vascular endothelial cells)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
'I declare that I have no competing interests'