

Title: A Comparative Hepatoprotective effect of Liraglutide and Nano Extracts of *Ficus carica* and *Olea europaea* leaves on Diabetes-induced in laboratory animals

SAFA HASSAN M QAHL
University of Jeddah, Faculty of Science UJ 21959, KSA

OBJECTIVES: The comparative effect of liraglutide and nano extracts of *ficus carica* and *Olea europaea* leaves on the histopathological and blood biomarkers of the liver of male albino Wistar rats was investigated in type 2 diabetes mellitus adult male rats' model. **METHODS:** Forty (40) male albino Wistar rats of an average body weight of 247.60±6.58 g were used for this study. Thirty rats from a total of 30 rats used for this study were injected with a single dose of 60 mg/kg/ b.w of STZ to induced a diabetic rat's model and assigned into (2,3&4) test diabetic groups (10) rats in each group. The rest (10) rats served as the negative control Group (1). Rats in Group (2) were served as the positive control, rats in Groups (3) were injected subcutaneous with liraglutide at doses of (0.2 mg/kg/ b.w /day), and rats in Group (4) received orally 0.45gm/250g b.w./day of nano-extract of leaves. After 8 weeks of treatment, rats from each group were sacrificed and blood was collected for enzyme ALP, ALT and AST assay. Liver were harvested for histopathological examination. **RESULTS:** Showed significantly elevated levels of serum AST, ALT and ALP indicative of hepatocellular damage in test group (2) .Histopathological examination of liver tissue of rats in test groups (2) revealed marked hepatic degeneration characterized by vascular congested and degeneration of endothelial lining the walls lumen, cellular infiltration, sinusoidal dilatation, hydropic degeneration, focal necrosis, nuclear pleomorphism, and loss of kupffer and endothelial cells lining the blood sinusoids, bile duct proliferation when compared to the control Group (1). These hepatocytes lesions were significantly reduced with liraglutide and nano extracts of NEML administration in test groups 3&4. **IN CONCLUSION:** Treatment with the liraglutide and nano extract of NEML leaves restored the altered parameters in serum enzymes towards normal, and nano extract of NEML leaves possess good anti-inflammation and antioxidant, potentials than liraglutide that exhibited hepatoprotective properties against diabetic-induced hepatocellular damage in rats.

Biography

My name is Safa Qahl, I am 32 years old, I am lecturer. I have completed master degree in biology in 2015 with GPA 4.98 out 5 from KAU and currently preparing my PhD in cytology and histology, I have completed most of the PhD requirements with GPA 5 out of 5, I participated in Geneva invention exhibition in 2016 in a poster entitled "The effect of olive oil and fig on the liver", Where I discovered a medical formula which resulted in it being patented and won the bronze medal, I am very interested in research, innovations and inventions.

Presenting author details

Full name: SAFA HASSAN M QAHL
Contact number: +966566971919
Twitter account: Dr_SafaQahl
Session name/ number:
Category: Poster presentation