Effect of Tualang Honey Supplementation in Weight Reduction and Dyslipidaemia in High Cholesterol Diet- induced Obese Rats

IIUM Medical Journal Malaysia • Article • 2025 • DOI: 10.31436/imjm.v24i03/2833

Abu Hanifah N. [a]; Sirajudeen K.N.S. [b]; Abdullah N.Z. [a]; Zunariah B. [b]; Ahmad Affandi K. [a]; +2 authors

[a] Department of Pathology and Laboratory Medicine, Kulliyyah of Medicine, International Islamic University Malaysia, Pahang, Kuantan, Malaysia

Show all information

Full text Export Save to list

Document Impact Cited by (0) References (48) Similar documents

Abstract

INTRODUCTION: Obesity is a key risk factor for many chronic diseases. Malaysia records the highest prevalence of obesity in Southeast Asia. Tualang honey has been proven to treat many chronic diseases but its effect on weight reduction has yet to be well-studied. This study aimed to investigate the effects of Tualang honey (TH) supplementation on body weight and lipid profile in a 12% high cholesterol diet (HCD) induced obesity rat model. MATERIALS AND METHODS: Forty male Sprague-Dawley rats were assigned to five groups (n=8): Group 1 (normal diet), Group 2 (normal diet + TH 3.0 g/kg), Group 3 (12% HCD), Group 4 (12% HCD + TH 3.0 g/kg), and Group 5 (12% HCD + Orlistat 10 mg/kg). Diets were administered for 12 weeks, followed by treatments for six weeks. Body weight was measured weekly, and blood was collected for lipid analysis at the end of the study. RESULTS: We demonstrated a significantly lower final body weight of rats in Group 2 (328.25 ± 25.49 g) compared to Group 1 (409.13 ± 16.33g) ($p<0.001$) and in Group 4 as compared to Group 3 (343.88 ± 44.24 g vs 471.00 ± 19.55g, $p<0.001$). The administration of TH also significantly reduces the cholesterol (Med=1.8 mmol/L, IQR=0.7 vs Med=3.2 mmol/L, IQR=0.8, $p<0.05$) and triglyceride level (Med=0.9 mmol/L, IQR=0.3 vs Med=1.5 mmol/L, IQR=1.0, $p=0.001$) in Group 4 compared to Group 3. CONCLUSION: Tualang honey supplementation has been shown to reduce body weight and improve lipid profiles in 12% HCD-induced obese rats.

Detailed information

Bibliographic information

Document type	Article
DOI	10.31436/imjm.v24i03/2833
EID	2-s2.0-105016179578
Original language	English
Publication date	1 July 2025
PubMed ID	
Source type	Journal
ISSN	27352285
Publisher	International Islamic University Malaysia
Publication year	2025
Source title	IIUM Medical Journal Malaysia
Volume	24
Issue	3
Pages	116 - 125

Authors (7)

Abu Hanifah N. [a]

Sirajudeen K.N.S. [b]

Abdullah N.Z. [a]