

ANTI-ATHEROSCLEROTIC EFFECTS OF EURYCOMA LONGIFOLIA IN RATS FED ON HIGH-FAT DIET

Fakhria Al-Joufi¹, Anil K. Saxena^a, **Imad M. Al-Ani**¹, Norlelawati A. Talib¹, Rafidah H. Mokhtar², Norsidah Ku-Zaifah¹

¹ Department of Basic Medical Sciences, Kulliyah of Medicine, International Islamic University Malaysia, P. O. Box 141, 2571 Kuantan, Pahang, Malaysia. ² Faculty of Medicine, Universiti Sains Islam Malaysia, Nilai, Negeri Sembilan, Malaysia.

Introduction: Cardiovascular diseases (CVD) particularly atherosclerosis, have become a growing health problem, especially in developing countries. Hyperlipidemia is widely known as a dominant risk factor for the development of atherosclerosis.

Objective: This study was designed to investigate the effects of *Eurycoma Longifolia* (EL) on the testosterone level, its associated biochemical changes to the lipid profile and intima media thickness (IMT) in rats fed on high-fat diet.

Methodology: Twenty young, adult male Sprague-Dawley (SD) rats were housed for 12 weeks. After one week of acclimatization, they were randomly divided into four groups of 5 animals each and treated for 12 weeks as follows: Group ND was given only normal diet, group NDEL was given normal diet and EL extracts (15mg/kg) dissolved in distilled water, group HFD was given only high fat diet and group HFDEL was given high fat diet and EL extracts (15mg/kg).

Results: Rats which were treated with EL (NDEL and HFDEL) showed a significant increase ($p < 0.05$) in the testosterone levels. There was a significant decrease ($p < 0.05$) in triglyceride (TG) in the HFDEL group compared to the HFD group. The histological sections of aortas revealed a significant decrease ($p < 0.05$) in IMT in the HFDEL when compared with the HFD group. No histological changes were observed in the NDEL group compared with the ND group and there was no significant difference in IMT values between the NDEL and the ND groups.

Conclusion: These findings suggest that EL is a promising protective agent against atherosclerosis induced by HF diet.

EFFECT OF FLAXSEED EXTRACT ON THE LIVER HISTOLOGICAL STRUCTURE IN STREPTOZOTOCIN INDUCED DIABETIC RATS

Imad M. Al-Ani¹, Ahmed N. Abired², Basma E. Mustafa², Emad N. Abdel Wahab¹ and Marwan S. Azzubaidi²

¹ Department of Basic Medical Science, Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Pahang, Malaysia. ² Department of Basic Medical Science, Kulliyah of Dentistry, International Islamic University Malaysia, Kuantan, Pahang, Malaysia.

Introduction: Diabetes mellitus has become a serious public health issue all over the world. The management goal in diabetes is to keep blood glucose levels as close to normal as possible. Medications used to treat diabetes are usually associated with multiple adverse drug reactions. Recently, many traditional medications sourced from plants have become popular in the management of diabetes mellitus. Flaxseed has been used as a traditional medication for centuries and could potentially influence blood glucose levels.

Objective: This study aims to evaluate the hepatoprotective effects of flaxseed extract in streptozotocin (STZ)-induced diabetic rats.

Methodology: Diabetes mellitus was induced in Sprague-Dawley rats using a single injection of streptozotocin (60 mg/kg intra-peritoneal). The rats were divided into five groups of 8 rats each. Group NC, normal control rats; Group NF, normal rats treated with flaxseed extract (400 mg/kg); Group DC, diabetic control rats; Group DG, diabetic rats treated with glibenclamide (0.6 mg/kg); Group DF, diabetic rats treated with flaxseed extract (400 mg/kg); for 4 weeks.

Results: There were significant increases in relative liver weight, blood glucose levels in the DC group comparing to the NC group ($p < 0.05$). The disturbance of these parameters was ameliorated in the DF and DG groups. Histological

observation revealed congestion of central veins, degeneration of hepatocytes, and reduction of glycogen granules in the DC group. These pathological changes were ameliorated in the flaxseed extract and glibenclamide treated rats.

Conclusion: Flaxseed extract may represent an alternative treatment for the control of diabetes mellitus and its related hepatopathy.

DISTRIBUTION PATTERN OF HEPATITIS C VIRUS IN EASTERN PENINSULAR MALAYSIA FOR THE PAST DECADE

H.M. Hadzri¹, H.P. Tee² and C.A. Azlida²

¹Department of Medicine, Jalan Hospital Campus, 25150 Kuantan, Pahang. ²Gastroenterology Unit, Department of Medicine, Hospital Tengku Ampuan Afzan, Jalan Tanah Putih, 25100 Kuantan, Pahang.

Introduction: Analysis of the Hepatitis C Virus' (HCV) genotypic spread in a particular area has a crucial impact on public health. Genotyping is essential before initiating treatment.

Methodology: This is a hospital-based cohort of 133 chronic hepatitis C patients, collected prospectively among subjects attending Hospital Tengku Ampuan Afzan, Kuantan, within an area of eastern Peninsular Malaysia. We assessed the rate and distribution of HCV genotypes during two consecutive periods, from 2005 to 2006 and from 2013 to 2014, according to age, gender, race and risk factors.

Results: There were more male, Malay ethnic and IDU patients seen in the latter cohort. Genotype 3 was the dominant genotype followed by genotype 1, 4 and 6. Statistical evaluation of the demographics of HCV patients stratified by genotypes did not reveal any significant difference between the two periods. There was no association between the risk factors analyzed and the acquisition of different HCV genotypes. However, there was significant difference between males and patients receiving treatment in the second cohort ($p < 0.005$).

Conclusion: The genotype distribution remains similar although there was a trend towards having slightly more genotype 3 in the latter years. The proportions of male patients and patients receiving treatment in the latter period were significantly higher.

DIABETIC RETINOPATHY IN PRIMARY CARE CLINIC USING NON-MYDRIATIC RETINAL CAMERA

Mohd Aznan Md Aris¹, Khairidzan Mohd Kamal², Razman Mohd Rus³ and Fa'iza Abdullah¹

¹ Department of Family Medicine, Kulliyah of Medicine, International Islamic University Malaysia, 25200 Kuantan, Pahang, ² Department of Ophthalmology, Kulliyah of Medicine, International Islamic University Malaysia, 25200 Kuantan, Pahang; ³ Department of Community Medicine, Kulliyah of Medicine, International Islamic University Malaysia, 25200 Kuantan, Pahang

Introduction: Diabetic retinopathy is the commonest complication of diabetes mellitus. It is usually detected through funduscopic examination during initial clinical assessment of diabetic patients. For this purpose, the use of retinal cameras in primary care clinics have been introduced for the clinical assessment and diagnosis of diabetic retinopathy.

Objective: To determine the prevalence of diabetic retinopathy through the use of non-mydratic retinal cameras among diabetic patients in government primary care clinics. Its associated risk factors were also evaluated.

Methodology: A cross sectional study was carried out. The subjects were selected through stratified random sampling from among those who attended government primary care clinics in Kuantan, Pahang between May 2010 and April 2011. The subjects were interviewed and assessed clinically using a structured questionnaire. The retinal examination was performed using non-mydratic retinal cameras by trained and accredited staff.

Results: Out of 400 subjects, the majority of them were diagnosed with diabetes mellitus for less than 5 years (58.8%) and had controlled blood pressure (51.0%). The prevalence of diabetic retinopathy and maculopathy were 33.5% and 17.8% respectively. 22.3% of scanned retinas had mild non-proliferative diabetic retinopathy. Diabetic retinopathy was independently associated with chronic kidney disease {OR: 3.46, 95% CI (1.76, 6.80)} and high HbA1c {OR: 1.12,