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**EFFECT OF RAMADAN FASTING ON NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD): A PROSPECTIVE OBSERVATIONAL STUDY**

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**INTRODUCTION**

Ramadan fasting is known to have positive impacts on health. Its influence on individuals with non-alcoholic fatty liver disease (NAFLD), as measured by the liver stiffness measurement (LSM) remains uncertain. Therefore, this study aimed to determine the effect of Ramadan fasting on patients with NAFLD by assessing the LSM, anthropometric and biochemical parameters of fatty liver.

**METHODOLOGY**

A prospective observational study was conducted on 51 NAFLD patients, who were fasted during Ramadhan month. We analysed pre- and post-Ramadan liver stiffness measurement (LSM), and anthropometric and biochemical parameters of fatty liver.

**RESULT**

The results showed a statistically significant decrease in LSM after fasting ( $P < 0.05$ ), with a mean difference of 1.62 (95%CI: 1.34, 1.90). There were also statistically significant weight, waist circumference, and BMI reductions after the fasting period ( $P < 0.05$ ). The mean differences, along with their respective 95% confidence intervals, demonstrate a decrease in weight by 5.02 (3.90, 6.15) kg, waist circumference by 3.41 (1.99, 4.83) cm, and BMI by 2.14 (1.58, 2.70) kg/m<sup>2</sup>. Based on biochemical parameters, there were statistically significant reductions in fasting blood sugar (FBS) and HbA1c ( $P$ -value  $< 0.05$ ), with a decrease of 0.55 mmol/L and 0.16%, respectively. Similarly, aspartate aminotransferase (AST), alanine aminotransferase (ALT), cholesterol, triglycerides (TG), and low-density lipoprotein (LDL) were also shown to have reductions post-fasting, with a mean difference (95%CI), 18.35 (14.88, 21.83), 21.27 (17.21, 25.34), 0.80 (0.58, 1.01), 0.27 (0.18, 0.36), and 0.82 (0.61, 1.02), respectively.

**CONCLUSION**

The study demonstrates that Ramadan fasting could improve LSM, anthropometric, and biochemical measurements among patients with NAFLD.

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**COMPARISON OF DENOSUMAB AND ALENDRONATE EFFICACY AND RELATED DIABETES RISK IN PATIENTS WITH OSTEOPOROSIS**

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**INTRODUCTION/BACKGROUND**

Osteoporosis and diabetes mellitus are highly prevalent among postmenopausal women and the elderly in Malaysia. Recent studies have suggested blocking the RANK ligand may improve glucose metabolism and delay the development of diabetes.

**METHODOLOGY**

We compared the efficacy of denosumab with alendronate in treating osteoporosis and examined the potential reduction of the risk of diabetes in each treatment group.

**RESULTS**

This is a cross-sectional analysis of patients over 40 years old who received osteoporosis treatment with denosumab and alendronate for more than a year at Putrajaya Hospital. Independent t-test and Pearson's chi-square were used to examine associations between continuous and categorical variables.

A total of 182 patients were included (mean [SD] age, 71.2 [10] years; 170 [93%] female). The majority were of Malay descent (47%) followed by Chinese (32%) and Indian (20%). Hypertension was the most common comorbidity (63%) followed by dyslipidaemia (48%), diabetes (29%) and prediabetes (15%). Majority with previous osteoporosis fractures received denosumab (54%) versus alendronate (44%). The denosumab group showed significant improvements in bone strength ( $p < 0.01$ ) mainly at the lumbar spine compared to the alendronate group. Patients who developed diabetes were numerically lower in the denosumab group compared to the alendronate group, 53% vs 63%, respectively, with an OR of 0.688 (95%CI, 0.34 – 1.39).

**CONCLUSION**

These findings highlight significant improvements in BMD with the use of denosumab compared to alendronate, particularly at the lumbar spine. Additional prospective studies are needed to establish the role of denosumab in lowering diabetes risk in osteoporosis patients.