Impact of Ramadan Fasting on Healthy Adult Males: Immuno-Bio-Chemical Study

Pinar Khalid Khudhur (BSc; MSc)¹, Saman Muhsin Abdulkareem (BSc; MSc)², Rastee Hasan Saeed (BSc; MSc)³ and Lajan Qasim Rahamn (BSc; MSc)⁴

Abstract

Background: The mandatory month is Ramadan on Muslim’s fasting. Muslims cease from ingestion of food and water starting onset to grass widower to who wants to be fasting in this month that’s according to the lunar calendar; so many immunological, physiological and biochemical changes may happen.

Objective: To evaluate some vitamins, hormones and immunological markers in the first and the 28th day of fasting.

Patients and Methods: Twenty five healthy adult male who were subjected to this study. The age range was 24-49 years with mean ± SD (31.6±7.07). Body weight, BMI, serum glucose, total cholesterol, high density lipoprotein-cholesterol (HDL-C), low density lipoprotein-cholesterol (LDL-C), very low density lipoprotein-cholesterol (VLDL-C), triglyceride (TG), aspartate amino transferase (AST), alanine amino transferase (ALT), alkaline phosphatase (ALP), total serum bilirubin (TSB), serum creatinine, blood urea, serum electrolytes (Na, K, Cl), haemoglobin concentration (Hb), haematocrit, vitamin-D, testosterone and C-reactive protein (CRP) were estimated in the 1st day and the 28th day of Ramadan month. The while-interval of study was 27 days. Human privacy, statistical analyses and P value were used.

Results: Serum glucose, LDL, ALT, TSB, serum creatinine, blood urea, vitamin D and CRP were significantly decreased in 28th day of fasting (P=0.0002, P=0.005, P=0.009, P=0.00004, P=0.013, P=0.0074, P=0.0109, respectively). There were no significance change in total cholesterol, VLDL-C, TG, AST, ALP, K, Cl, Hb, haematocrit, testosterone (P>0.05). While HDL-C and serum Na were increased significantly in this study (P= 0=0.004, P=0.0214, respectively).

Conclusion: Consuming two meals per a day during month of Ramadan has a balancing effect on biochemical, enzymes and CRP in fasted men.

Key words: Ramadan Fasting, Lipid Profile, Vitamin and Hormone Profile, CRP.

Corresponding Author: pinar.khudhur@med.hmu.edu.krd

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¹, ⁴ Department of Microbiology- College of Medicine-Hawler Medical University- Erbil - Iraq
², ³ Departments of Biology - College of Education - Salahaddin University - Erbil – Iraq.