

Conference Paper

Iron Overload Reduces Cholesterol and Triglyceride Serum of Mice

Devi Agustin Setiawati¹, Mas Rizky A. A. Syamsunarno^{1,2,3}, Pandji Irani Fianza⁴, Nur Atik⁵, Neni Anggraeini^{1,2,6}, Mohammad Ghozali², Ratu Safitri^{2,3,7}, and Ramdan Panigoro²

¹Department of Biochemistry and Molecular Biology Faculty of Medicine Universitas Padjadjaran

²Central Laboratory, Universitas Padjadjaran

³Department of Biology, Faculty of Mathematics and Natural Sciences, Bandung-Sumedang Street KM 21st, West Java 45363, Indonesia

⁴Department of Internal Medicine Faculty of Medicine Universitas Padjadjaran, Pasteur Street No. 38, Bandung, West Java, Indonesia

⁵Medical Laboratorium Technologyst of Bakti Asih School of Analyst, Padasuka Atas Street No.233, Padasuka, Cimencyan, Bandung West Java, Indonesia

⁶Department of Anatomy and Cell Biology, Bandung-Sumedang Street KM 21st, West Java 45363, Indonesia

⁷Study Program of Biotechnology, Post Graduate School, Universitas Padjadjaran, Dipati Ukur Street no. 35, Bandung West Java, Indonesia

Corresponding Author:

Mas Rizky A.A. Syamsunarno
rizky@unpad.ac.id

Received: 03 October 2017

Accepted: 10 October 2017

Published: 29 November 2017

Publishing services provided
by Knowledge E

© Devi Agustin Setiawati et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the VMIC Conference Committee.

Abstract

Introduction: Most of the case of patient with hemoglobin disorder genes need routine blood transfusion throughout their life. It leads to increase iron accumulation with liver as the main organ for iron storage. Liver is the main organ for metabolic process, including triglyceride and cholesterol. However, correlation between metabolism of triglyceride and cholesterol, and iron overload condition is remain uncertain. The purpose of this study was to investigate the effect of iron overload to triglyceride and cholesterol level in the serum of mice.

Material & Method: Three groups of mice were divided by the dose of iron dextran (0, 0.1 and 0.3 mg/mouse). Iron dextran was injected intraperitoneally. After 14 days of treatment, liver histology and serum triglyceride and total cholesterol were examined.

Result & Discussion: Liver weight was higher in iron dextran injected mice proportional with dose injection. The liver histology showed normal tissue and slightly inflammation condition with no fibrosis sign. Total cholesterol and triglyceride serum were lower 21,46% and 27,68% respectively in mice injected with 0.3 mg/mouse of iron dextran compare to control group.

Conclusion: Iron dextran injection in 0.3 mg/mice of dose reduces cholesterol and triglyceride serum without alteration liver morphology.

Keywords: iron overload; Triglyceride serum; Cholesterol Serum.

OPEN ACCESS