



The Effects of Combined Omega-3 and Vitamin E Supplementation on Preeclampsia Cases in Hasan Sadikin Hospital Bandung

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Abstract: Etiology and pathogenesis of preeclampsia syndrome have not been fully understood, although the theory of stress oxidative inducing endothelial injury has been studied for many years and it has been recognized to play a key role in preeclampsia development. Polyunsaturated fatty acid (PUFA) omega-3 shows beneficial effect in cardiovascular remodelling for women with hypertension. In addition, low intake of vitamin E has been found as a predictor of preeclampsia. Observational data reveals that omega-3 supplementation without vitamin E has no significant effect on vascular endothel. This study is an interventional, randomized control trial with single blind technique. It is conducted by comparing pregnancy induced hypertension cases that are divided into two groups with different treatments. One group was given antihypertension medicine, omega-3 and vitamin E supplements while the other was only given antihypertension medicine. This study aims to determine the effect of the supplementation of combined omega-3 and vitamin E in preeclampsia development. The study was conducted through 36 females with gestational hypertension from January to April 2014 at Hasan Sadikin Hospital with its network-hospitals. Blood pressure and protein urine examination were assessed before and after intervention. The result shows that on the interventional group, only 4 subjects had a progression into preeclampsia, whereas on the non-interventional group, 11 subjects (61.11 %) were found (22.2 % vs 61.11 %) with p value 0.015 ($p < 0.05$). It is concluded that the supplementation of combined omega-3 with vitamin E could prevent the development of preeclampsia.

Keyword (Omega-3, pregnancy induced hypertension (PIH), stress oxidative, vitamin E).