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Antihyperlipidemia Combination of Simvastatin and Herbal Drink (Conventional Drug Interaction Potential Study and Herbal As Prevention Adverse Effect on Combination Therapy Hyperlipidemia)

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Abstract : Combination therapy may allow interaction on two drugs or more that can give adverse effects on patients. Simvastatin is a drug of antihyperlipidemia it can interact with drugs which work on cytochrome P450 CYP3A4 because it can interfere the performance of simvastatin. Flavonoid found in plants can inhibit the cytochrome P450 CYP3A4 if taken with simvastatin and can increase simvastatin levels in the body and increases the potential side effects of simvastatin such as myopati and rhabdomyolysis. Green tea leaves and mint are herbal medicine which has the effect of antihiperlipidemia. This study aims to determine the potential interaction of simvastatin with herbal drinks (green tea leaves and mint). This research method are experimental post-test only control design. Test subjects were divided into 5 groups: normal group, negative control group, simvastatin group, a combination of green tea group and the combination group mint leaves. The study was conducted over 32 days and total cholesterol levels were analyzed by enzymatic colorimetric test method. Results of this study is the obtainment of average value of total cholesterol in each group, the normal group (65.92 mg/dL), the negative control group the average total cholesterol test in the normal group was (69.86 mg/dL), simvastatin group (58.96 mg/dL), the combination of green tea group (58.96 mg/dL), and the combination of mint leaves (63.68 mg/dL). The conclusion is between simvastatin combination therapy with herbal drinks have the potential for pharmacodynamic interactions with a synergistic effect, antagonist, and a powerful additive, so the combination therapy are no more effective than a single administration of simvastatin therapy.

Keywords : hyperlipidemia, simvastatin, herbal drinks, green tea leaves, mint leaves, drug interactions
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