

ABSTRAK

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Latar belakang: Prevalensi sindrom metabolik dari tahun 2000-2019 semakin meningkat di berbagai negara sosiodemografi yang tinggi. Meningkatnya kadar ApoB, indeks aterogenik plasma, dan indeks castelli I-II dapat memprediksi penyakit kardiovaskular. Minyak ikan dan ekstrak kunyit dapat menurunkan kadar ApoB dan resiko penyakit kardiovaskular.

Tujuan: Mengetahui pengaruh minyak ikan patin (*Pangasius hypophthalmus*), ekstrak kunyit (*Curcuma longa Linn.*), dan kombinasinya terhadap kadar ApoB, AIP, dan IC I-II pada tikus *Wistar* Induksi *high fat high fructose diet*.

Metode: *True experimental* dengan *pre-post test control group design*. 30 ekor tikus *Wistar* jantan sindrom metabolik, dibagi 5 kelompok. Pengambilan darah untuk pemeriksaan kadar profil lipid dan ApoB serta perhitungan AIP dan CRI I-II. Analisis statistik dengan uji *Paired-t test*, *one-way ANOVA*, uji *Post-hoc* dan uji korelasi-regresi.

Hasil: *High fat high fructose diet* sebanyak 20gr/kgBB mampu menjadikan tikus sindrom metabolik. Intervensi minyak ikan patin, ekstrak kunyit, dan kombinasinya secara signifikan menurunkan berat badan, kadar ApoB, indeks aterogenik plasma, dan indeks castelli I-II.

Kesimpulan: Adanya efek pemberian minyak ikan patin (*Pangasius hypophthalmus*) dan ekstrak kunyit (*Curcuma longa Linn.*) maupun kombinasinya yang signifikan terhadap penurunan berat badan, kadar ApoB, indeks aterogenik plasma, dan indeks castelli I-II untuk menurunkan resiko penyakit kardiovaskular pada sindrom metabolik.

Kata kunci : kadar ApoB, AIP dan IC I-II, minyak ikan patin (*Pangasius hypophthalmus*), ekstrak kunyit (*Curcuma longa Linn.*), *high fat high fructose die*

ABSTRACT

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Background: The prevalence of metabolic diseases have been increasing over the last two decades with the greatest increase in high socio demographic index (2000-2019). The increase in ApoB levels, atherogenic index of plasma and castelli risk index I-II is prediction of cardiovascular disease in metabolic syndrome. Dietary fish oil and extract of Curcuma has been shown to beneficially reducing effect of ApoB levels and risk of cardiovascular disease.

Objectives: The aim of this study was to determine the effect of catfish (*Pangasius hypophthalmus*) oil, turmeric extract (*Curcuma longa* Linn.) and combination of the two on ApoB, index atherogenic of plasma and index castelli I-II in *Wistar* rats induced high fat high fructose diet.

Methods: True experimental dengan pre-post test control group design. Thirty male *Wistar* rats were randomly divided into 5 groups. The blood samples were analysed to measure lipid profile levels, ApoB, after that is using, atherogenic index of plasma and castelli risk index I-II. The statistical analysis using Paired-t test, one-way ANOVA, Post-hoc test and correlation-regression test.

Results: High fat high fructose diet.20gr/kgBB was able to make mice metabolic syndrome. The intervention of catfish oil, turmeric extract, and their combination significantly reduced body weight, the levels of ApoB, atherogenic index of plasma, and castelli risk index I-II

Conclusion: There is a significant effect of catfish (*Pangasius hypophthalmus*) oil and turmeric extract (*Curcuma longa* Linn.) or their combination on weight loss, ApoB, atherogenic index of plasma, and castelli risk index I-II levels to reduce the risk of cardiovascular disease in metabolic syndrome.

Keywords: *Pangasius hypophthalmus*, *Curcuma longa* Linn, atherogenic index of plasma, castelli risk index I-II, high fat high fructose diet