

Pengaruh durasi pemberian kombinasi akar kucing *acalypha indica* linn dan pegagan *centella asiatica* terhadap perubahan kadar malondialdehida dalam ginjal tikus pascahipoksia

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Abstrak

[ABSTRAK

Penyakit ginjal kronik merupakan kerusakan fungsi ginjal yang ireversibel. Stres oksidatif merupakan salah satu faktor utama dalam perkembangan penyakit ginjal kronik. Terdapat beberapa agen terapeutik yang dapat digunakan untuk menekan stres oksidatif, diantaranya adalah antioksidan. Beberapa herbal telah menunjukkan efek antioksidan dan dapat digunakan sebagai agen terapeutik. Tujuan penelitian ini adalah untuk menguji efikasi pemberian kombinasi *Acalypha indica* Linn pada dosis 200mg∙kgBB-1 dan *Centella asiatica* pada dosis 150mg∙kgBB-1 selama 3 hari, 7 hari, dan 14 hari untuk menekan stres oksidatif pada ginjal tikus Sprague dawley yang telah mengalami kondisi hipoksik selama 7 hari. Efek dari herbal ini akan dibandingkan dengan plasebo dan Pirasetam dengan dosis 50mg∙kgBB-1 selama 7 hari, serta tikus yang tidak mengalami hipoksia. Kadar malondialdehida (MDA) pada ginjal tikus tersebut digunakan untuk mengukur tingkat peroksidasi lipid. Hasil menunjukkan bahwa pemberian herbal ini menunjukkan perbedaan bermakna ($P<0.05$) antara tikus yang diberikan kombinasi herbal ini selama 7 hari dengan tikus yang tidak mengalami hipoksia, tetapi tidak terdapat perbedaan bermakna antara kelompok-kelompok tikus lain. Disimpulkan bahwa kombinasi *Acalypha indica* Linn dan *Centella asiatica* tidak mampu menurunkan kerusakan akibat peroksidasi lipid

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ABSTRACT

Chronic kidney disease is the irreversible damage on kidney function. Oxidative stress is a major factor on the progression of chronic kidney disease. A number of therapeutic agents could be used to suppress oxidative stress, such as antioxidants. Some herbals have been shown to have antioxidant property and could be used as therapeutic agents. The aim of this study was to test the efficacy of a combined supplementation of *Acalypha indica* Linn at 200mg∙kgBW-1 and *Centella asiatica* at 150mg∙kgBW-1 for 3 days, 7 days, and 14 days to suppress oxidative stress in the kidneys of Sprague dawley mice that have been exposed to hypoxic condition for 7 days. The effect of these herbals was compared to placebo and Piracetam at 50mg∙kgBW-1 for 7 days, as well as mice not exposed to hypoxic condition. Malondialdehyde (MDA) concentration on the kidneys of these mice was used to measure the extent of lipid peroxidation. The result showed that supplementation of these herbals caused a significant difference ($P<0.05$) between mice given the herbals for 7 days vs mice not exposed to hypoxic condition, but no other significant difference is found among the mice. It is concluded that combined supplementation of *Acalypha indica* Linn and *Centella asiatica* did not manage to reduce lipid peroxidation., Chronic kidney disease is the irreversible damage on kidney function. Oxidative stress is a major factor on the progression of chronic kidney disease. A number of therapeutic agents could be used to suppress oxidative stress, such as antioxidants. Some herbals have been shown to have antioxidant property and could be used as therapeutic agents. The aim of this study was to

test the efficacy of a combined supplementation of *Acalypha indica* Linn at 200mg/kgBW-1 and *Centella asiatica* at 150mg/kgBW-1 for 3 days, 7 days, and 14 days to suppress oxidative stress in the kidneys of Sprague dawley mice that have been exposed to hypoxic condition for 7 days. The effect of these herbals was compared to placebo and Piracetam at 50mg/kgBW-1 for 7 days, as well as mice not exposed to hypoxic condition. Malondialdehyde (MDA) concentration on the kidneys of these mice was used to measure the extent of lipid peroxidation. The result showed that supplementation of these herbals caused a significant difference ($P < 0.05$) between mice given the herbals for 7 days vs mice not exposed to hypoxic condition, but no other significant difference is found among the mice. It is concluded that combined supplementation of *Acalypha indica* Linn and *Centella asiatica* did not manage to reduce lipid peroxidation.]