Karakterisasi ekstrak air daun gandarusa (Justicia gendarussa Burm. F.) dan pengaruhnya terhadap kadar asam urat plasma tikus putih jantan yang diinduksi kalium oksonat

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Abstrak

Peningkatan kadar asam urat dalam darah (hiperurisemia) dapat menyebabkan keadaan patologis seperti gout. Penelitian ini dilakukan untuk mengetahui pengaruh pemberian ekstrak air daun gandarusa (Justicia gendarussa Burm. F.) secara oral terhadap penurunan kadar asam urat plasma tikus putih jantan (Rattus novergicus) galur Sprague-Dawley yang telah dibuat hiperurisemia dengan induksi kalium oksonat. Mutu ekstrak diperiksa dengan melakukan karakterisasi ekstrak yang meliputi karakteristik ekstrak spesifik dan non-spesifik. Tiga puluh lima ekor tikus dibagi secara acak dalam tujuh kelompok. Pemberian sediaan uji dilakukan satu kali dalam sehari secara oral selama delapan hari. Terdapat tiga kelompok variasi dosis ekstrak air daun gandarusa yaitu berturut-turut 0,345 g/200 g bb; 0,69 g/200 g bb; dan 1,38 g/200 g bb, dua kelompok pembanding yaitu alopurinol 36 mg/200 g bb dan herbal "X" 170 mg/200 g bb, serta kelompok kontrol induksi dan kontrol normal CMC 0,5%. Induksi kalium oksonat 50 mg/200 g bb secara intra peritoneal dilakukan satu jam sebelum diberikan sediaan uji terakhir pada hari ke delapan dan satu jam kemudian dilakukan pengambilan darah. Pengukuran kadar asam urat menggunakan metode enzimatik dengan urikase yang hasilnya diukur secara kolorimetri pada panjang gelombang 520 nm. Ekstrak air daun gandarusa memiliki efek hipourisemik setelah dua jam induksi kalium oksonat. Efektivitas penurunan kadar asam urat variasi dosis ekstrak berturut-turut adalah 80,00%; 80,41%; dan 95,51%. Hasil ini menunjukkan penggunaan secara kontinyu ekstrak air daun gandarusa efektif dalam menurunkan kadar asam urat pada penyakit gout.

.....An elevation of blood uric acid (hyperuricemia) can cause pathologies condition such as gout. The aim of the research is to know the influence of oral administration of the gandarusa leaf water extract (Justicia gendarussa Burm.F.) as a hypouricemic agent in white male Sprague-Dawley strain rats (Rattus novergicus) model pre-treated by potassium oxonate. The quality of extract was tested with extract characterization which consisted of specific and non-specific characteristics. Thirty five rats were taken randomly into seven groups and oral administration of all test drugs were given once a day for eight days. There were three doses variation groups of gandarusa leaf water extract insequence 0.345 g/200 g bw; 0.69 g/200 g bw; and 1.38 g/200 g bw; two compare groups of allopurinol 36 mg/200 g bw and herb "X" 170 mg/200 g bw; and two control groups were induction control and normal control of 0.5% CMC. Intraperitoneal administration of potassium oxonate 50 mg/200 g bw was given an hour before the last administration of test drugs in the eighth day, and the blood of rats were collected an hour later. The measurement of plasma uric acid used enzymatic method with uricase which the result was measured in colorimetri at 520 nm. The gandarusa leaf water extract has a hypouricemic effect after 2 h its administration to potassium oxonate-pretreated rats. The effectivity of lowering uric acid level from doses variation are 80.00%; 80.41%; and 95.51% respectively. These results showed that a continuous intake of the gandarusa leaf water extract effective for lowering the uric acid level in gout disease.