EFEK PEMBERIAN EKSTRAK ETANOL SELEDRI (*Apium graveolens* L.) TERHADAP KADAR *SUPEROXIDE DISMUTASE* TIKUS PUTIH (*Sprague dawley)* MODEL *CHRONIC KIDNEY DISEASE*

ABSTRAK

Gagal Ginjal Kronik didefinisikan sebagai adanya kerusakan ginjal atau laju filtrasi glomerulus <60 mL / min per 1,73 m² selama 3 bulan atau lebih. Ekstrak etanol seledri (*Apium graveolens* L.) berfungsi sebagai antioksidan dan anti-inflamasi yang berpotensi mencegah kerusakan seluler yang ditandai dengan terjadinya stres oksidatif dan penurunan kadar *superoxide dismutase* (SOD) pada *chronic kidney disease*. Penelitian ini bertujuan untuk mengetahui efek pemberian seledri (*Apium graveolens* L.) dalam mencegah penurunan kadar SOD tikus putih (*Sprague dawley*) model CKD. Metode penelitian ini adalah eksperimental dengan *post test only with control group design*. Dua puluh lima ekor tikus putih dibagi dalam 5 kelompok. Kelompok A: kelompok normal sebagai kontrol sham, kelompok B: kelompok nefrektomi sebagai kontrol sakit, kelompok C, D, dan E adalah kelompok nefrektomi dan diberikan ekstrak etanol seledri 250 mg/kgBB, 500 mg/kgBB, dan 1000 mg/kgBB 14 hari sebelum dan 14 setelah dibuat model 5/6 nefrektomi subtotal. Rerata kadar SOD kelompok A= 45,22 ± 1,16; B= 32,84 ± 2,14; C= 39,34 ± 1,16; D= 39,41 ± 1,37; E= 41,22 ± 1,61. Hasil uji *One Way* ANOVA SOD menunjukkan nilai p=0,000 (p<0,05). Uji *post hoc* LSD SOD menunjukkan hasil perbedaan rerata yang signifikan antara kelompok A dengan semua kelompok data, dan antara kelompok B dengan kelompok C, D dan E (p<0,05). Pemberian ekstrak etanol seledri (*Apium graveolens* L.) dapat mencegah penurunan kadar SOD tikus model CKD.

Kata kunci: 5/6 nefrektomi subtotal, *Apium graveolens* L., Gagal Ginjal Kronik, Seledri, *Superoxide dismutase*

THE EFFECT OF ETHANOL EXTRACT OF *Apium graveolens* L. TO SUPEROXIDE DISMUTASE LEVEL ON CHORNIC KIDNEY DISEASE RAT MODELS (*Sprague dawley)*

ABSTRACT

Chronic Kidney Disease (CKD) is defined as kidney damage or glomerular filtration rate (GFR) less than 60 mL/min/1.73 m^2 for 3 months or longer. Celery extract (*Apium graveolens L.)* contains antioxidant and anti-inflammatory has potential effect to prevent cellular damage characterized by oxidative stress and the decrease of *superoxide dismtuase* (SOD) levels in CKD. The aim of this research was to analyze the effect of celery (*Apium graveolens* L.) in preventing the decrease of SOD levels in CKD rats models (*Sprague dawley*). The method was an experimental study with post test only with control group design. Twenty five males of white rats were randomly assigned to 5 groups. Group A: normal rats as sham control, group B as sick control, group C (250 mg/kgBW ethanol extract of celery), group D (500 mg/kgBW), and group E (1000 mg/kgBW). On the 15^{th} after celery extract or aquades was given, sham operation was performed in group A, while 5/6 subtotal nephrectomy was performed in group B, C, D, and E. Then the celery extract and aquades was given until the 14^{th} day after operation. The mean result of SOD concentration in group A= 45,22 ± 1,16; B= 32,84 ± 2,14; C= 39,34 ± 1,16; D= 39,41 ± 1,37; E= 41,22 ± 1,61. Result One Way ANOVA test SOD shows a value of $p = 0.000$ ($p < 0.05$). The post hoc LSD test SOD showed significant mean differences between group A with all data groups and between group B with group C, D, and E ($p < 0.05$). Administration of ethanol extract of celery (*Apium graveolens* L.) can prevent the decrease of rat SOD levels in CKD rats models.

Keywords: 5/6 subtotal nephrectomy, *Apium graveolens* L., Celery, Chronic Kidney Disease, Superoxide dismutase