

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

ABSTRAK

Latar Belakang: CKD dapat menyebabkan penurunan fungsi ginjal yang progresif, salah satunya ialah kegagalan fungsi ekskresi Na^+ sehingga dapat berakibat terjadinya hipertensi. Hipertensi pada CKD dapat menyebabkan peningkatan progresivitas dari CKD. Ekstrak etanol seledri (*Apium graveolens L.*) memiliki kandungan pthalides sebagai vasodilator yang berpotensi mencegah hipertensi pada CKD.

Tujuan: Penelitian ini bertujuan untuk mengetahui efek pemberian ekstrak etanol seledri (*Apium graveolens L.*) dalam mencegah peningkatan tekanan darah tikus putih (*Sprague dawley*) model CKD.

Metode penelitian: Penelitian ini merupakan penelitian eksperimental dengan *pre and posttest with control group design*. Sebanyak 25 ekor tikus putih dibagi dalam 5 kelompok. Kelompok A: kontrol sehat, kelompok B: kontrol sakit, kelompok C, D, dan E adalah kelompok nefrektomi dan diberikan ekstrak etanol seledri 250mg/kgBB, 500mg/kgBB, dan 1000mg/kgBB 14 hari sebelum dan 14 setelah nefrektomi. Pengukuran tekanan darah dilakukan diawal dan diakhir perlakuan.

Hasil: Rerata tekanan darah sistolik pretest kelompok A=93,60±8,96; B=100,60±8,84; C=98,60±27,46; D=130,80±15,8; E=122,20±35,8. Rerata tekanan darah diastolik pretest kelompok A=68,00±4,06; B=72,40±9,07; C=74,80±22,86; D=98,60±18,20; E=79,60±23,01. Rerata tekanan darah sistolik posttest kelompok A=89,00±5,91; B=116,00±31,91; C=106,80±27,26; D=102,20±18,70; E=96,20±20,37. Rerata tekanan darah diastolik posttest kelompok A=68,60±6,94; B=89,60±23,60; C=76,80±23,41; D=78,80±15,73; E=78,00±24,12. Hasil uji *paired t-test* tekanan darah sistolik kelompok A: $p=0,470(p>0,05)$; B: $p=0,283(p>0,05)$; C: $p=0,694(p>0,05)$; D: $p=0,023(p<0,05)$; E: $p=0,089(p>0,05)$. Hasil uji *paired t-test* tekanan darah diastolik menunjukkan nilai $p>0,05$. Hasil uji beda antarkelompok menunjukkan nilai $p>0,05$.

Kesimpulan: Pemberian ekstrak etanol seledri (*Apium graveolens L.*) tidak dapat mencegah peningkatan tekanan darah tikus putih (*Sprague dawley*) model CKD.

Kata kunci: *Apium graveolens L.*, *chronic kidney disease*, seledri, tekanan darah.

THE EFFECT OF ETHANOL EXTRACT OF CELERY (*Apium graveolens L.*) TO BLOOD PRESSURE ON CHRONIC KIDNEY DISEASE MODEL RATS (*Sprague dawley*)

ABSTRACT

Background: CKD causing progressive decline in kidney function such as failure in excreting sodium which causing hypertension. Hypertension in CKD causing further progression on CKD. Ethanol extract of celery (*Apium graveolens L.*) has vasodilator effect from phthalides which had potential to prevent hypertension in CKD.

Goals: This study aimed to know the effect of celery ethanol extract (*Apium graveolens L.*) administration in preventing the increase of blood pressure on chronic kidney disease model rats (*Sprague dawley*).

Study Method: This research was an experimental study with pre and posttest with control group design. Twenty five males of white rats were randomly assigned to 5 groups. Group A (normal rats), group B (sick control), group C (250mg/kgBW ethanol extract of celery), group D (500mg/kgBW), and group E (1000mg/kgBW). On the 14th 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 14th day after operation. Blood pressure was measured before and after intervention.

Result: Paired t-test of diastolic blood pressure shows that no significant differences between groups ($p > 0,05$) There is no significant differences of celery ethanol extract (*Apium graveolens L.*) administration on blood pressure after intervention ($p > 0,05$).

Conclusion: Administration of ethanol extract of celery (*Apium graveolens L.*) can not prevent the increase of blood pressure in CKD rats models.

Keywords: *Apium graveolens L.*, blood pressure, celery, chronic kidney disease