Close

Web of Science
Page 1 (Records 1 -- 1)
[1]

Print

Record 1 of 1

Title: The effects of Urtica dioica L. ethanolic extract against urinary calculi in rats

Author(s): Keles, R (Keles, Rumeysa); Sen, A (Sen, Ali); Ertas, B (Ertas, Busra); Kayali, D (Kayali, Damla); Eker, P (Eker, Pinar); Sener, TE (Sener, Tarik Emre); Dogan, A (Dogan, Ahmet); Cetinel, S (Cetinel, Sule); Sener, G (Sener, Goksel)

Source: JOURNAL OF RESEARCH IN PHARMACY **Volume:** 24 **Issue:** 2 **Pages:** 205-217 **DOI:** 10.35333/jrp.2020.137 **Published:** 2020

Times Cited in Web of Science Core Collection: 0

Total Times Cited: 0

Usage Count (Last 180 days): 0

Usage Count (Since 2013): 0

Cited Reference Count: 49

Abstract: Nephrolithiasis is common urological problem and stone formation has multiple underlying pathogenetic factors. We investigated the possible preventive and therapeutic effect of Urtica dioica ethanol extract (UD) on ethylene glycol-induced nephrolithiasis model in rats. Sprague-Daw ley rats were divided into lour groups (n = 10). The control group was given normal drinking water for 8 weeks and was administered vehicle by gastric gavage. Stone formation was induced by adding 0.75% ethylene glycol (EG) to their drinking water. UD (700 mg/kg) was given orally lor 8 weeks to the preventive group and I or last 4 weeks to the treatment respectively. At the end of the experiment, urine, blood samples and kidney tissues were obtained. In 24-hour urine samples, calcium and citrate levels were decreased and oxalate levels were increased in EG whereas LID treatment groups reversed these parameters back to control levels. In addition, serum levels of creatinine and urea were increased in EG while LID significantly reduced these parameters. Malondialdehyde, 8-hydroxydeoxyguanosine and tumor necrosis alpha levels, and caspase- 3 and N-acetyl-beta-glucosaminidase activities were elevated in EG group and showed a decrease in LID treated groups. Glutathione level was decreased in EG group, whereas it was increased in UD preventive group. Histological examination showed an improvement in UD treated groups. Our results suggest that UD is effective both in prevention and treatment for kidney stones. The mechanism underlying this effect may be the antioxidant effect of UD and the effect on the concentration of stone-forming components in the urine.

Accession Number: WOS:000520855700004

Language: English

Document Type: Article

Author Keywords: Urtica dioica; kidney stone; calcium oxalate; urolithiasis; antioxidant

KeyWords Plus: GLYCOL-INDUCED UROLITHIASIS; ANTIOXIDANT; KIDNEY; NEPHROLITHIASIS; NEPHROTOXICITY; INFLAMMATION; INJURY

Addresses: [Keles, Rumeysa; Ertas, Busra; Sener, Goksel] Marmara Univ, Fac Pharm, Dept Pharmacol, TR-34668 Istanbul, Turkey.
[Sen, Ali] Marmara Univ, Fac Pharm, Dept Pharmacognosy, Istanbul, Turkey.
[Kayali, Damla; Cetinel, Sule] Marmara Univ, Fac Med, Dept Histol & Embryol, Istanbul, Turkey.
[Eker, Pinar] Umraniye Res & Training Hosp, Dept Biochem, Istanbul, Turkey.
[Sener, Tarik Emre] Marmara Univ, Fac Med, Dept Urol, Istanbul, Turkey.
[Dogan, Ahmet] Marmara Univ, Fac Pharm, Dept Pharmaceut Bot, Istanbul, Turkey.

Corresponding Address: Sener, G (corresponding author), Marmara Univ, Fac Pharm, Dept Pharmacol, TR-34668 Istanbul, Turkey.

E-mail Addresses: gsener@marmara.edu.tr

Author Identifiers:

Author	Web of Science ResearcherID	ORCID Number
Sener, Tarik Emre	AAR-8427-2020	0000-0003-0085-7680
kayali, damla	AAX-7624-2020	
Sen, Ali		0000-0002-2144-5741

Publisher: MARMARA UNIV

Publisher Address: GOZTEPE CAMPUS, KADIKOY, ISTANBUL, 34722, TURKEY

Web of Science Categories: Pharmacology & Pharmacy

Research Areas: Pharmacology & Pharmacy

IDS Number: KW0IB

ISSN: 2630-6344

29-char Source Abbrev.: J RES PHARM

ISO Source Abbrev.: J. Res. Pharm.

Source Item Page Count: 13

Funding:

Funding Agency	Grant Number
Marmara University Scientific Research Projects Commission	SAG-C-DRP-131217-0653

This study was supported by Marmara University Scientific Research Projects Commission with project number SAG-C-DRP-131217-0653.

Open Access: Bronze

Output Date: 2021-01-12

Close

Web of Science
Page 1 (Records 1 -- 1)
[1]

Print

Clarivate
Accelerating innovation

© 2021 Clarivate Copyright notice Terms of use Privacy statement Cookie policy

Sign up for the Web of Science newsletter Follow us