

Role of febuxostat in retarding progression of diabetic kidney disease with asymptomatic hyperuricemia: A 6-months open-label, randomized controlled trial

[Article - PDF](#)[Article - HTML](#)[Article - XML](#)**Published** Jun 13, 2018**DOI** <https://doi.org/10.17179/excli2018-1256>**Mohd Noor Azreey Mukri**

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Wei-Yen Kong

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Ruslinda Mustafar

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Syahrul Sazliyana Shaharir

Rheumatology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Shamsul Azhar Shah

Department of Community Health, UKM Medical Molecular Biology Institute, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Abdul Halim Abdul Gafor

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Rozita Mohd

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Rizna Abdul Cader

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Lydia Kamaruzaman

Nephrology Unit, Department of Medicine, National University of Malaysia, Jalan Yaakob Latif, Bandar Tun Razak, Cheras 56000, Kuala Lumpur, Malaysia

Abstract

Introduction: Hyperuricemia is associated with chronic kidney disease (CKD) progression and poor cardiovascular outcomes. We studied the effect of febuxostat on estimated glomerular filtration rate (eGFR), proteinuria and monitored the safety profile of the medication.

Material and Methods: This is a prospective open-label, randomized study in CKD stage 3 and 4 patients with diabetic nephropathy and asymptomatic hyperuricemia. Patients were randomized into febuxostat 40 mg daily and no treatment group using block randomization method and were followed up for 6 months. Their usual care for diabetes mellitus,

hypertension and dyslipidemia were continued in the study. Blood and urine investigations were monitored at baseline, 3 months and 6 months.

Results: The eGFR in febuxostat group was stabilized at 6 months with no significant reduction [26.2 (IQR 14.30) at baseline to 26.3 (IQR 15.2) ml/min/1.73 m²]. Whereas, there was a significant reduction of the eGFR in no treatment group from 28.2 (IQR 17.9) to 27.6 (IQR 19.3) ml/min/1.73 m² (p value < 0.01). We found the HbA1c (glycosylated hemoglobin) was significantly increased in febuxostat group from 7.2 ± 0.5 % at baseline to 7.6 ± 1.4 at 6 months (p value 0.04) but no significant change of HbA1c in the no treatment group. Proteinuria level was unchanged in both groups. The commonest adverse event was joint pain.

Conclusions: Febuxostat was able to preserve eGFR in CKD patients with diabetic nephropathy and this effect was beyond glycemic control. Increment of HbA1c level in febuxostat group needs further larger trials.

How to Cite

Mukri, M. N. A., Kong, W.-Y., Mustafar, R., Shaharir, S. S., Shah, S. A., Abdul Gafor, A. H., Mohd, R., Abdul Cader, R., & Kamaruzaman, L. (2018). Role of febuxostat in retarding progression of diabetic kidney disease with asymptomatic hyperuricemia: A 6-months open-label, randomized controlled trial. *EXCLI Journal*, 17, 563-575.
<https://doi.org/10.17179/excli2018-1256>

[More Citation Formats](#)

Issue

[Vol 17 \(2018\)](#)

Section

[Original articles](#)



This work is licensed under a [Creative Commons Attribution 4.0 International License](#).

Authors who publish in this journal agree to the following terms:

- The authors keep the copyright and grant the journal the right of first publication under the terms of the Creative Commons Attribution license, [CC BY 4.0](#). This license permits unrestricted use, distribution and reproduction in any medium, provided that the original work is properly cited.
- The use of general descriptive names, trade names, trademarks, and so forth in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.
- Because the advice and information in this journal are believed to be true and accurate at the time of publication, neither the authors, the editors, nor the publisher accept any legal responsibility for any errors or omissions presented in the publication. The publisher makes no guarantee, express or implied, with respect to the material contained herein.
- The authors can enter into additional contracts for the non-exclusive distribution of the journal's published version by citing the initial publication in this journal (e.g. publishing in an institutional repository or in a book).

Powered by



LEIBNIZ RESEARCH CENTRE
FOR WORKING ENVIRONMENT
AND HUMAN FACTORS

[Make a Submission](#)

USER

Username

Password

☐ Remember me

Login

JOURNAL CONTENT

Search

Search Scope

All

Search

BROWSE

By Issue

By Author

EXCLI Journal has been added to

Directory of Open Access Journals (DOAJ)

Electronic Journals Library (EZB)

Web of Science

SCOPUS

Pubmed Central

Pubmed

EBSCO Academic Search

SCImago

LIVIVO

BASE

Impact Factor

2013: 0.728

2014: 0.857

2015: 1.292

2016: 1.462

2017: 2.424

EXCLI Journal is a platinum open access journal. There are neither fees for authors submitting their papers nor fees for readers accessing PDFs of the published papers.

Articles published in EXCLI Journal are licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

