



# Anticoagulation in Patients with End-Stage Renal Disease and Non-Valvular Atrial Fibrillation – Review Article

COLLECTION: GME  
RESEARCH DAY 2021

**PUBLISHED ABSTRACT**

**MAHMOUD KHALIFA**

**YARA ADEL ALTAHAN**

**PAAVANA VARANASI**

*\*Author affiliations can be found in the back matter of this article*



Levy  
Library  
Press

## ABSTRACT

Over the years, the number of patients with end-stage renal disease (ESRD) have been steadily increasing. Cardiovascular causes account for 55.2% of all deaths among ESRD patients. In particular, there is an increased risk of atrial fibrillation (AF) & venous thromboembolism (VTE). AF is more prevalent in hemodialysis (HD) (21.3%) than in peritoneal dialysis (PD) (15.5%) or in patients with kidney transplant (13.7%). In addition to AF, the risk of stroke (event rate of 5.61 per 100 person years) in ESRD patients is greatly increased compared to those without renal impairment (event rate of 3.61 per 100 person years), which is very concerning due to the already increased cardiovascular mortality among these patients.

ESRD is a complex condition in which usual interventions do not often provide the desired outcome seen in other comorbidities. The inherent paradox of hypercoagulability and increased risk of bleeding along with the lack of risk stratification models further complicate the selection of anticoagulants in patients with ESRD and AF. Due to the lack of controlled trials and the contradictory results and outcomes, it is not possible to argue for or against the use of any particular therapeutic agent. Data regarding risks and benefits of antiplatelet agents use among ESRD patients with AF has been conflicting and there is no consensus or guideline regarding their routine use.

CORRESPONDING AUTHOR:  
**Mahmoud Khalifa**

BronxCare Health System, US  
[msakms1991@gmail.com](mailto:msakms1991@gmail.com)

---

## KEYWORDS:

End stage renal disease;  
ESRD; Atrial fibrillation;  
Anticoagulation; Non  
valvular; dialysis; Novel oral  
anticoagulants; NOACs; Direct  
oral anticoagulants; DOACs;  
Coumadin; Warfarin; Vitamin K  
antagonist

## TO CITE THIS ARTICLE:


Khalifa M, Altahan YA, Varanasi P. Anticoagulation in Patients with End-Stage Renal Disease and Non-Valvular Atrial Fibrillation – Review Article. *Journal of Scientific Innovation in Medicine*. 2021; 4(2): 6, pp. 1–2. DOI: <https://doi.org/10.29024/jsim.102>


## COMPETING INTERESTS

The authors have no competing interests to declare.

## AUTHOR AFFILIATIONS

**Mahmoud Khalifa**  [orcid.org/0000-0002-7603-507X](https://orcid.org/0000-0002-7603-507X)  
BronxCare Health System, US

**Yara Adel Altahan**  [orcid.org/0000-0003-0435-0895](https://orcid.org/0000-0003-0435-0895)  
Royal College of Surgeons in Ireland, RCSI, IE

**Paavana Varanasi**  [orcid.org/0000-0001-9669-397X](https://orcid.org/0000-0001-9669-397X)  
BronxCare Health System, US

TO CITE THIS ARTICLE:  
Khalifa M, Altahan YA,  
Varanasi P. Anticoagulation in  
Patients with End-Stage Renal  
Disease and Non-Valvular  
Atrial Fibrillation – Review  
Article. *Journal of Scientific  
Innovation in Medicine*. 2021;  
4(2): 6, pp. 1–2. DOI: [https://  
doi.org/10.29024/jsim.102](https://doi.org/10.29024/jsim.102)

Submitted: 04 May 2021

Accepted: 04 May 2021

Published: 24 May 2021

### COPYRIGHT:

© 2021 The Author(s). This is an  
open-access article distributed  
under the terms of the Creative  
Commons Attribution 4.0  
International License (CC-BY  
4.0), which permits unrestricted  
use, distribution, and  
reproduction in any medium,  
provided the original author  
and source are credited. See  
[http://creativecommons.org/  
licenses/by/4.0/](http://creativecommons.org/licenses/by/4.0/).

*Journal of Scientific Innovation  
in Medicine* is a peer-reviewed  
open access journal published  
by Levy Library Press.