Acta Neurophysiologica
ISSN: 2996-7554

Academic Strive
Researcher's perception is our reality

Letter To Editor *Volume 6 Issue 2*

Chronic Kidney Disease, Antithrombotic, And Bleeding: How Can We Do Better?

Chakraborty D*

Department of Neurology, Apollo Multispeciality Hospitals, India

***Corresponding author:** Chakraborty Debabrata, Department of Neurology, Apollo Multispeciality Hospitals, 700010, Kolkata, West Bengal, India, Tel: +91 9007338171; Email: drdchakraborty1980@gmail.com

Received Date: April 15, 2025; **Published Date:** April 25, 2025

Dear Editor,

Ischemic strokes are more likely to happen in people with CKD (43% of those who have an estimated GFR of less than 60 ml/min/1.73 m^2) and almost 30 times more likely in people who are on dialysis [1].

Now, CKD patients also have a 1.5-fold higher bleeding risk than non-CKD patients. People with albuminuria and an eGFR of less than 45 mL/min/1.73 m^2 had a 3.5-fold higher risk of bleeding [2].

So, antithrombotics in CKD patients are a real challenge, especially when we need to give dual antiplatelets (large artery atherosclerosis/recent stent placement) or anticoagulants (cardioembolic strokes). If a person with CKD has an infarct in the posterior fossa or large cortical infarct, we should probably avoid dual antiplatelets to prevent hemorrhagic conversion of the infarct unless there is an absolute indication. In fact, CKD patients also have a higher incidence of resistant hypertension (approximately 30%) and hypertensive surges, hence the incidence of hemorrhages. If anticoagulant is indicated, it is better to start with heparin, which has a shorter half-life and is easier to reverse if there is haemorrhagic conversion (which happens more often in the early stages of a stroke), rather than NOACs, which have a longer half-life and no available antidote.

We need to balance between the chances of ischemic and hemorrhagic events, and if we can predict the chance of bleeding accurately, we can select patients and antithrombotics and adjust doses more confidently. The classical "bleeding time" (highly subjective and operator dependent) does not demonstrate an association with renal function in CKD. Conventional hemostatic tests mostly exclude platelet disorders, hereditary and acquired coagulation factors, resulting in limited information on global hemostasis. Basic coagulation tests, such as activated partial thromboplastin time and prothrombin time, only capture 5% of thrombin formation and are not effective in predicting bleeding risks when used to monitor the function of anticoagulant [3].

The Global Coagulation Assay (GCA) on the other hand checks for plasminogen activator inhibitor-1 and includes overall hemostatic potential, calibrated automated thromboelastography. Compared to current methods, it is a completer and more accurate predictor that will revolutionize future procedures and help in decision making during complex clinical scenario.

As an example, with these advanced tests it was found that CKD patients with higher levels of growth differentiation factor-15 (GDF-15) were more likely to have major bleeding, but lower arterial thromboembolism [3]. Because of this, it is better to avoid anticoagulants in these group of patients.

References

1. Lee M, Saver JL, Chang KH, Liao HW, Chang SC, et al. (2010) Low glomerular filtration rate and risk of stroke: meta-analysis. BMJ 341: c4249.

2. Saeed Z, Sirolli V, Bonomini M, Gallina S, Renda G (2024) Hallmarks for Thrombotic and Hemorrhagic Risks in Chronic Kidney Disease Patients. Int J Mol Sci 25(16): 8705.

3. Brook R, Wang J, Barit D, Ho P, Lim HY (2024) Spontaneous bleeding in chronic kidney disease: global coagulation assays may predict bleeding risk. Res Pract Thromb Haemost 8(5): 102520.