Validation of the padua prediction score in predicting venous thromboembolism among patients with chronic kidney disease admitted to the intensive care unit: A Retrospective cohort study

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Chronic kidney disease (CKD) is associated with a hypercoagulable state that increases the risk of venous thromboembolism (VTE), particularly in critically ill patients in the intensive care unit (ICU)1,2. Despite pharmacologic thromboprophylaxis, VTE events still occur due to immobility, central venous catheters, and underlying comorbidities3,4. The Padua Prediction Score (PPS), a validated risk stratification model for medical inpatients, integrates demographic and clinical factors to predict VTE risk but has not been fully validated in ICU-admitted CKD patients5. This retrospective cohort study was conducted at the ICU of the National Kidney and Transplant Institute from January 2019 to May 2024. Adult CKD patients admitted to the ICU who underwent diagnostic work-up for VTE using lower extremity venous duplex ultrasound and/or chest CT angiography were included. Patients were categorized into high-risk (PPS ≥4) and low-risk (PPS k Among 219 eligible patients, the cumulative incidence of VTE was 2.3%. The incidence was 3.9% in the high-risk group and 1.4% in the low-risk group. PPS showed a sensitivity of 60.0% and specificity of 65.0%, with a positive predictive value of 3.9% and negative predictive value of 98.6%. While the overall diagnostic performance of PPS in this cohort was limited, its high negative predictive value suggests potential clinical utility in identifying CKD ICU patients at low risk for VTE. However, its low positive predictive value and moderate sensitivity/specificity limit its ability to guide thromboprophylaxis decisions in high-risk individuals. These findings support the need for larger, multicenter validation studies to optimize VTE risk prediction in this vulnerable population.

Biography

John Carlo L. Tuazon completed his Doctor of Medicine degree at the age of 25 from Far Eastern University – Nicanor Reyes Medical Foundation, Quezon City, Philippines and residency training in Internal Medicine from National Kidney and Transplant Institute, Quezon City, Philippines.